

F1 in Schools Equipment

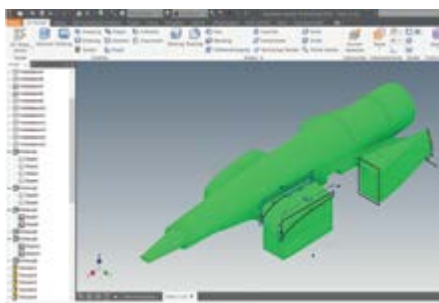
RACE EQUIPMENT & CONSUMABLES



As Proud Founder and Sponsor of F1 in Schools, Denford is delighted to be the official supplier of the latest F1 in Schools Race Equipment and Consumables.

The company has developed a complete range of cutting edge equipment, designed and manufactured in the UK by Denford, to support the F1 in Schools Challenge, including a lightweight, portable Race Track and a Start Gate with clear display and data storage. The Air Trace Visualisation System is also a valuable asset for aerodynamic capability analysis and for demonstrating this in the classroom.

Denford continues to enhance and develop the equipment to meet the technological demands of competing students and to future-proof the F1 in Schools STEM Challenge.

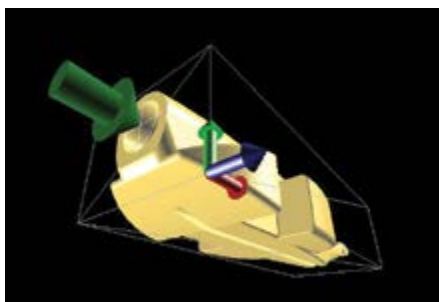


DESIGN

AUTODESK.

3D Design Software

Design your car using Autodesk® 3D Design Software. Autodesk and F1 in Schools have partnered to offer design tools to help prepare next-generation designers. Students and schools participating in F1 in Schools can access an extensive portfolio of Autodesk® 3D Design Software free of charge. To register for your software, please visit: www.f1inschools.com/software.html



QuickCAM Pro

QuickCAM Pro provides the link between your 3D design software and the Denford range of CNC Routers. QuickCAM Pro includes the F1 Car Wizard, which simplifies the process of creating the CNC file to cut both sides of an F1 car.

Site Licence

BI01806P



ANALYSE

Virtual Wind Tunnel Software

F1 WWT Analysis Software Mk8

Single Seat

5 User Licence

Site Licence

BI01841

BI01841A

BI01841C



MAKE

CNC Machine Options for F1 Car Manufacture:

F1 Router

Compact 1000

Compact 1000 Pro (Metal Cutting)

Router 2600

Router 2600 Pro (Metal Cutting)

Router 6600

Router 6600 Pro (Metal Cutting)

F1R001000

MRC002000A

MRC003000

MRP002000

MRP003000

MRF002000

MRF003000



F1 in Schools Car Manufacturing Fixture

To enable the manufacture of Formula 1 Class cars. The fixture clamps directly to the T-slotted table on the Compact 1000/Pro, Router 2600/Pro and Router 6600/Pro and is also suitable for use on the VMC 1300 (it is necessary to remove the tool changer to fit the fixture)

NR1/0400JA



F1 Entry / Development Class Starter Kits

SOLO

1 x F1 Model Block Car Kit

1 x IsoSketch 3D Drawing Tool - single blister pack

F1DKIT01

TEAM

5 x F1 Model Block Car Kit

5 x IsoSketch 3D Drawing Tool - single blister pack

F1DKIT05

GROUP

10 x F1 Model Block Car Kit

1 x IsoSketch 3D Drawing Tool - class pack of 30

F1DKIT30

F1 Model Block (pack of 10)

This official F1 Model Block measures

223mm x 65mm x 50mm, with a consistent weight and density, and contains a pre-drilled hole for the Power Pack.

F1223/10

Equipment available to purchase from the
NEW Denford Webshop (UK Customers only)



denfordwebshop.com

F1 in Schools Equipment

RACE EQUIPMENT & CONSUMABLES



MAKE

F1 Class Wheels

F1 Class Wheels - Black (pack of 100)

NX4531



F1 Model Block Car Kit

Includes 4 x F1 Class Wheels, 1 x Sandpaper, 2 x Screw Eyes, 2 x F1 Axles, 4 x Axle Bushes, 1 x F1 Model Block

N13226F1M01



Screw Eyes

Use these screw eyes to keep your car on the track
Screw Eyes (pack of 100)

N16020



F1 Axles

Use the strength of steel to mount your model wheels
F1 Axles - 66mm (pack of 100)

N16010



Axle Bushes

1/4" OD for use with F1 Axles (pack of 100)

NX4532



Paint Stand

Holds your car during the painting process. The car is suspended by the cartridge hole and once in the stand, can be rotated to paint all sides

N54528

TEST



Air Trace Visualisation System

Includes Air Trace Visualisation Tunnel and Air Trace Smoke Generator with Air Trace Fluid

F1AT001000



**Air Trace Smoke Generator
(inc. 500ml bottle of Air Trace Fluid)**

Complete with Custom Polycarbonate Nozzle and 2 x Smoke Distribution Rake Attachments
Supplied in robust carry case

B106006M

Air Trace Fluid (500ml bottle)

N56806

Equipment available to purchase from the NEW Denford Webshop (UK Customers only)



denfordwebshop.com

F1 in Schools Equipment

RACE EQUIPMENT & CONSUMABLES



RACE

F1 Race Track

23. 65 Metre-long Elevated Track (11 sections and 12 legs) with screen printed start and finish sections

F1RT001000B

Option: Flight Case for F1 Race Track

F1RTFC



F1 Race Control System

For use with the F1 Race Track, the F1 Race Control System includes:

1 x F1 Start Gate, 1 x F1 Finish Gate with F1 branded wraps, 2 x F1 Start Boxes and 2 x F1 Start Triggers

F1RS001000B

Option: Flight Case for F1 Race Control System

F1RSFC

Option: Flight Case for F1 Race Control System & Sector Gate

F1RSFC-SG



F1 Race System Package

Competition-Standard Race Package

Includes:

1 x F1 Elevated Race Track with screen printed start and finish sections,
1 x F1 Race Control System with F1 branded wraps on Start and Finish Gates

PKFF1B



F1 Sector Gate Timing System

Additional Timing Gate for use with F1 Race Control System (not Stand Alone). The Sector time is recorded by the Race System and will allow car acceleration and deceleration graphs to be calculated.

Can only be used with the new F1 Race Track

F1RS003000



Car Deceleration System (for new F1 Race Track)

The car deceleration system consists of tapered brushes which gradually slow cars down after they have crossed the finishing line

F1CDS001001



F1 Roll Out Race Track System

24 Metre-long Roll Out Track with support brackets for Start & Finish Gates and tether line mounting system.

F1RT001000R0



F1 Race Control System – Stand Alone

Stand Alone Race System can be used as a floor mounted Race System, or mounted on the old-style Track. Standard F1 Race Control System with additional Finish Sensor Gate and Cables to mount the Timing Sensors, with F1 branded wraps

F1RS002000B



F1 Race System Package – Roll Out Race Track

This Race Package, with Roll Out Track, is ideal for testing cars and is also easily transportable and easy to store Includes:

1 x Roll Out Race Track System and 1 x Race Control System – Stand Alone

PKFF2B



Denford Power Packs - Standard

Denford Power Packs 8 gms (pack of 360)

F1CO2ST

Denford Power Packs - Race

Denford Power Packs 8 gms (pack of 360) (separately weighed to guarantee a race weight range of within 0.5 grams)

F1CO2CMP



F1 in Schools Track Banners (for new F1 Race Track)

Track Banners for use with F1 Race Track, featuring chequered flag borders, F1 in Schools logo and Denford logo

F1RTB

Equipment available to purchase from the NEW Denford Webshop (UK Customers only)



denfordwebshop.com

F1 in Schools Primary Class

RACE EQUIPMENT & CONSUMABLES



F1 in Schools Primary Class - Group Starter Pack (Makes 50 Cars) *

PCCP50

Consists of:

50 x Printed Chassis Nets, 50 x Printed Engine Housing Nets,
50 x Blank F1 Bodyshell Nets, 200 x F1 Class Wheels, 200 x Axle Bush,
50 x Axle Guides, 100 x F1 Axles and 100 x Axle Tether Line Guides

F1 in Schools Primary Class - Starter Pack (Makes 5 Cars) *

PCCP05

Consists of:

5 x Printed Chassis Nets, 5 x Printed Engine Housing Nets,
5 x Blank F1 Bodyshell Nets, 20 x F1 Class Wheels, 20 x Axle Bush,
5 x Axle Guides, 10 x F1 Axles and 10 x Axle Tether Line Guides

*All items are available individually



F1 Race System Package - Roll Out Race Track

PKFF2B

Ideal for testing cars and is also easy to transport and store.

Includes: F1 Roll Out Race Track System & F1 Race Control System
(Stand Alone)



Denford Power Packs 4gm (Pack of 100)

F1C02/100

Denford Power Packs 4gm (Pack of 300)

F1C02/300



Option - Design:

IsoSketch 3D Drawing Tool (Class Pack of 30)

ISOCP30



Option - Make:

Silhouette Cameo 4 12" Cutter - White

BIO1819SC4



Option - Test:

Air Trace Visualisation System

Includes: Air Trace Visualisation Tunnel, Air Trace Smoke Generator
& Air Trace Fluid

F1AT001000

Denford Primary STEM Project

RACE EQUIPMENT & CONSUMABLES



Primary STEM Project Pack (Makes 50 Cars)*

ARCP02

Supplied in a Storage Box and Includes:
50 x Printed Chassis Nets, 200 x Primary STEM Project Wheels,
50 x Propulsion Tubes, 50 x Propulsion Tube End Caps,
50 x Axle Guides, 200 x Axle Bushes, 100 x F1 Axles and
50 x Tether Guide Tubes

Primary STEM Project Pack (Makes 5 Cars)*

PSCP05

Consists of:
5 x Printed Chassis Nets, 20 x Primary STEM Project Wheels,
5 x Propulsion Tubes, 5 x Propulsion Tube End Caps,
5 x Axle Guides, 20 x Axle Bushes, 10 x F1 Axles and
5 x Tether Guide Tubes

*All items are available individually



Primary STEM Project Launch System

F1AR001000A

Includes:
Air Launch Control Box, Air Launch Pump, Loading Pins,
Tether Block Assembly, Tether Guide Line



Primary STEM Project Roll Out Race Track

F1AR/0900

Roll out race track 10m.

Upgrade Primary STEM Car Kits to F1 in Schools Primary Class

Students who have taken part in the Primary STEM project can easily modify their 'air-powered' car kits with the addition of a 'Ready to Race Pack', which includes engine housing nets for a 4gm compressed air power pack, along with wider wheels (as used in the F1 in Schools Entry & Development Classes), and tether line guides.



Primary Class Ready to Race Pack (For 5 Cars)

PCRR05

Consists of:
5 x Printed Engine Housing Nets, 20 x F1 Class Wheels and
10 x Axle Tether Line Guides

Equipment available to purchase from the
NEW Denford Webshop (UK Customers only)



denfordwebshop.com

Denford Consumables

MATERIALS & CONSUMABLES



WOOD

A range of hardwoods suitable for machining on Denford Routers.

American Maple Wood Block

A creamy white hardwood with a close grain and fine, even texture.

Easy to work and finish, without the need for sanding.

Billet size: 160mm x 100mm x 20mm	Each	BI03509D
	Pack of 50	BI03509G



Round Pine Billets

Ideal for use with the Rotary Fixture attachments.

Billet size: 65mm Dia. x 150mm Long	Pack of 10	BI03509J
-------------------------------------	------------	----------



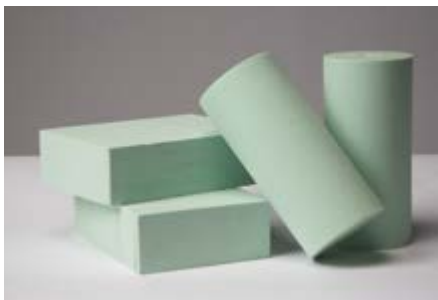
FOAM

These rigid, closed cell foam blocks are ideal for the rapid machining of parts on the full range of Denford Milling Machines and Routers.

High Density Foam

Ideal for most 3D prototyping applications. Offering plenty of surface detail, it is commonly used in moulds for vacuum forming and is also suitable for painting.

Billet size: 150mm x 110mm x 50mm	Each	BI03508
	Pack of 50	BI03508A



Billet size: 70mm Dia. x 150mm long	Each	BI03508DZ
	Pack of 15	BI03508E

Ideal for use with the Denford 4th axis programmable rotary fixture.



Model Foam

A low density and low cost foam product with easy machining properties which is particularly suitable for quick 3D realisation of design ideas.

Billet size: 160mm x 100mm x 50mm Each BI03508B



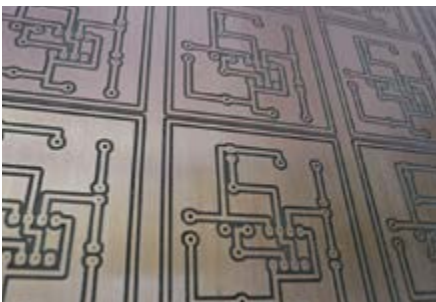
MODELLING BOARD

A high density (0.47g/m³) board ideal for high definition 3D work.

Modelling Board

For prototyping high quality models

Billet Size: 1500mm x 500mm x 50mm Each BI03508K



PCB BOARD

Ideal for use in conjunction with VR CNC Milling 5, PCB manufacturing feature.

Copper Coated Clad PCB Board (Single Sided)

Size: 233.4mm x 160mm x 1.6mm Each 4X40079

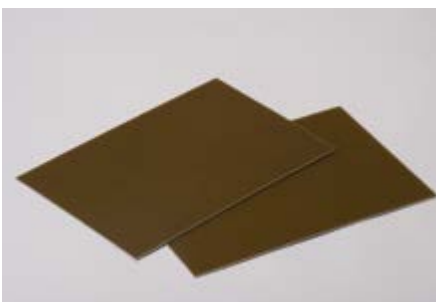


Photo Resist Coated PCB Board (Single Sided)

High quality dip coated positive working photoresist. This high resolution photoresist contains a dye which gives a good contrast against the copper allowing boards to be easily inspected at the developing stage. Panels are protected by a specially designed light-proof blue film which allows them to be guillotined without the risk of fracturing the photoresist.

Size: 233.4mm x 160mm x 1.6mm Each 4X40080

Denford Consumables

MATERIALS & CONSUMABLES



ALUMINIUM

Free cutting aluminium bars and billets are ideal for producing quick prototypes of metallic components. Easily polished, they yield professional looking component parts.

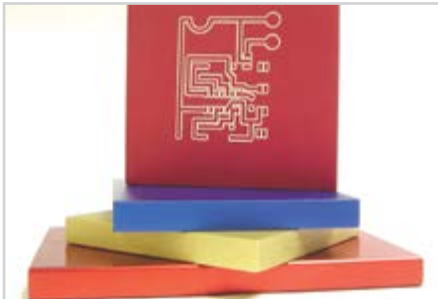
Aluminium Bar

Suitable for cutting on Denford Lathes.

Bar Size: 20mm Dia. x 55mm.

Non-Anodised

Each	BI03512A/1
Pack of 50	BI03512A



Aluminium Billet

Suitable for cutting on Denford Milling Machines.

Billet Size: 100mm x 100mm x 12mm.

Non-Anodised

Each	BI03511
Pack of 50	BI03511B

Red-Anodised

Each	BI03511A
Pack of 50	BI03511C



EXTRUDED ACRYLIC SHEET

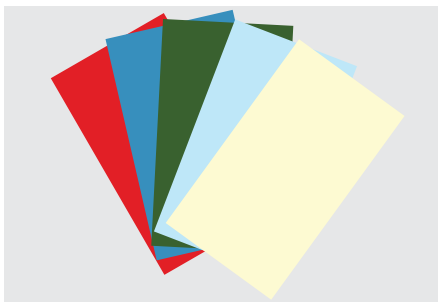
Excellent thermoforming characteristics enabling the production of intricate, delicate shapes.

30 off 3mm **Red** 600mm x 300mm.

BI03523

30 off 3mm **Yellow** 600mm x 300mm.

BI03523A



CAST ACRYLIC SHEETS

High quality, perfect surface finish and superb optical qualities.

30 off 3mm **Red** 600mm x 300mm.

BI03522

30 off 3mm **Blue** 600mm x 300mm.

BI03522A

30 off 3mm **Green** 600mm x 300mm.

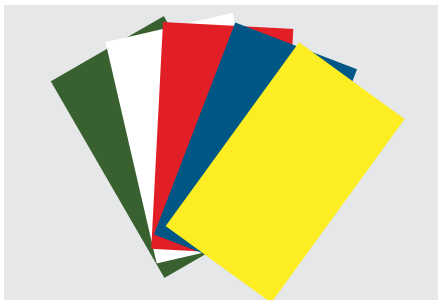
BI03522B

30 off 3mm **Transparent Blue** 600mm x 300mm.

BI03522C

30 off 3mm **Transparent Yellow** 600mm x 300mm.

BI03522D



HIGH IMPACT POLYSTYRENE

Rigid, easy cutting thermoplastic used for 2D projects. Can be quickly "layered" in different colours to produce low cost nameplates etc. Easily held on temporary machine tables using heavy duty double sided tape.

Billet Size: 160mm x 90mm x 2mm.

White

Pack of 50	BI03501F
------------	----------

Multi-Coloured

Pack of 50	BI03501
------------	---------



ACRYLIC RODS

- 1 metre x 6mm dia. fluorescent round – **Red.**
- 1 metre x 6mm dia. fluorescent round – **Yellow.**
- 1 metre x 6mm dia. fluorescent round – **Green.**
- 1 metre x 6mm dia. fluorescent round – **Blue.**
- 1 metre x 6mm dia. round – **Clear.**

BI03524
 BI03524A
 BI03524B
 BI03524C
 BI03524D



DOUBLE SIDED TAPE

Heavy Duty
 Size: 25mm x 33m

Pack of 10 BI03502A

Denford Consumables

TOOLING, CONSUMABLES & CURRICULUM PACKAGES



TOOLING PACKAGES

Recommended Router Tooling Package

B100846

For all Routers:

- 1/8" Dia x 1/4" Shank 2 Flute Cutter
- 1/8" Dia x 1/4" Shank Ball Nose Cutter
- 1/4" Dia x 1/4" Shank 2 Flute Cutter
- 1/4" Dia x 1/4" Shank Ball Nose Cutter
- 60 Degree V Cutter x 1/4" Shank



Set of Quick Change Toolholders & Collet

B100846SRH

For Compact 1000, Router 2600 and Router 6600:

- 10mm Collet for Kress Motor
- Quick Change Holder 1/4" ID 10mm Shank x 5
- Quick Change Holder 1/8" ID 10mm Shank



Set of Quick Change Toolholders & Collet

B100846PRH

For Compact 1000 Pro, Router 2600 Pro and Router 6600 Pro:

- 9-10mm Dia Collet to suit ER20 Collet Chuck
- Quick Change Holder 1/4" ID 10mm Shank x 5
- Quick Change Holder 1/8" ID 10mm Shank



Quick Change Router Tooling Package - Imperial

MRTPO3

For Compact 1000, Router 2600 and Router 6600:

- 10mm Router Collet for Kress Motor
- 1/4" ID Reducing Bush 10mm Shank x 2
- 1/8" ID Reducing Bush 10mm Shank
- 1/64" Engraving Cutter 1/8" Shank 45 Degrees
- 5/32" 2 Flute Cutter 1/4" Shank
- 1/4" Dia Ball Nose L/S 2 Flute Cutter (Solid Carbide)



Quick Change Router Tooling Package - Imperial

MRTPO4

For Compact 1000 Pro, Router 2600 Pro and Router 6600 Pro:

- 9-10mm Dia Collet to Suit ER 20 Collet Chuck
- 1/4" ID Reducing Bush 10mm Shank x 2
- 1/8" ID Reducing Bush 10mm Shank
- 1/64" Engraving Cutter 1/8" Shank 45 Degrees
- 5/32" 2 Flute Cutter 1/4" Shank
- 1/4" Dia Ball Nose L/S 2 Flute Cutter (Solid Carbide)



Micromill Quick Change Tooling Package - Imperial

MMTP01

Quick Change Tooling Package:

- 1 x 1/8" Dia Toolholder
- 2 x 1/4" Dia Toolholder
- 1/64" Carbide Engraving Cutter 1/8" Shank
- 1/8" Dia H.S.S. Slot Drill 1/4" Shank
- 1/4" Dia H.S.S. Slot Drill 1/4" Shank



Micromill Quick Change Tooling Package - Metric

BIO0811TP

Quick Change Tooling Package:

- 3 x 6mm Dia Toolholders
- 2mm Dia H.S.S. Slot Drill
- 4mm Dia H.S.S. Slot Drill
- 6mm Dia H.S.S. Slot Drill

Supplied as standard with Micromill Pro



VMC 1300/Pro Tools and Toolholders

VMC/0500RT

Recommended Set of Tools:

- 2mm Ball Nose, 2mm, 4mm & 6mm Slot Drills,
- 20mm End Mill

Recommended Set of Toolholders:

- 2 x 6mm & 1 x 20mm Sidelock Holders,
- 2 x ER32 Collet Chucks with 2 x 6-7mm Collets,
- 1 x ER32 Collet Spanner
- 1 x Hook Spanner to grip spindle while tightening collets

VMC/0500RH



Microturn Tooling Package

MT1/0100B

Recommended Tool Post and Tooling Package:

- Quick Change Tool Post + 3 Toolholders,
- Quick Change Carbide Insert Turning Toolholder and Pack of 10 Inserts,
- Parting Off Tool Blade,
- 1/4" Brazed Carbide Tipped Left Handed Cutting Tool

Supplied as standard with Microturn Pro



Turn 270 Pro Comprehensive Tooling Package

TRNCTP

Comprehensive Tooling Package:

- LH Turning Tool 12mm Shank,
- Pack of 10 Inserts for LH/RH Turning Tools,
- Pack of 10 Inserts for Parting Off Tool,
- External Threading Tool 12mm Shank with 10 Inserts,
- Boring Bar 8mm Shank with 10 Inserts
- 5mm Centre Drill
- 2 Stub Drills (5mm & 10mm)

Denford Consumables

TOOLING, CONSUMABLES & CURRICULUM PACKAGES



CONSUMABLES PACKAGES

F1 Model Block Car Kit

N13226F1M01

Includes 4 x F1 Class Wheels, 1 x Sandpaper, 2 x Screw Eyes, 2 x F1 Axles, 4 x Axle Bushes, 1 x F1 Model Block



50 Student Lithophane Consumables Package

CPLITHO

Cast Acrylic Sheet: 3mm Sky Blue 100 x 100mm x 50
 Cast Acrylic Sheet: 3mm White 100 x 100mm x 50
 Double Sided Tape x 2
 1/8" ID Reducing Bush 10mm Shank
 Engraving Cutter 0.4mm (1/64") 1/8" Shank 45 Degree x 2
 MDF Billet 5" x 8" x 5/8" (cut to size) x 2



Router Curriculum Consumables Package

CPR01

10 Hour 50 Student

MDF Billet 5" x 8" x 5/8" x 150
 MDF Billet 4" x 4" x 5/8" x 150
 Green Golf Tee (Pack of 250)
 Red Golf Tee (Pack of 250)

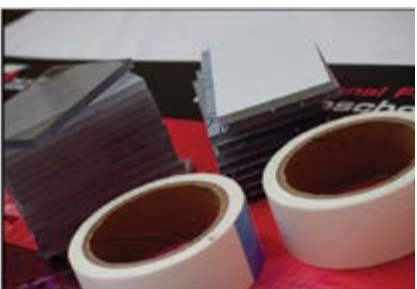


Turning Curriculum Consumables Package

CPTURN01

10 Hour 50 Student

Aluminium Bar 20mm Dia x 55mm Non-Anodised
 (Pack of 50) x 3



Milling Consumables Package

CPMILLO1

10 Hour 50 Student

Acrylic Billet 6" x 2.75" x 0.25" x 50
 Acrylic Billet 4" x 2.75" x 0.25" x 150
 Double Sided Tape x 2



Milling Consumables Package

30 Hour 50 Student

CPMILLO2

Protofoam Billet 3" x 2.75" x 0.75" x 150
 Protofoam Billet 1" x 1" x 1" x 50
 Double Sided Tape x 3



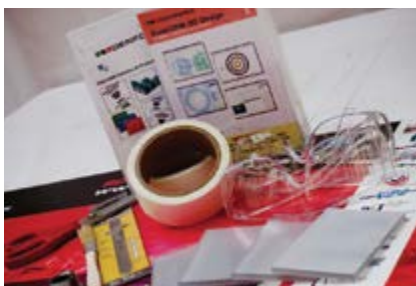
Milling Consumables Package

40 Hour 50 Student

CPMILLO3

Acrylic Billet 6" x 2.75" x 0.25" x 50
 Acrylic Billet 4" x 2.75" x 0.25" x 400
 Protofoam Billet 3" x 2.75" x 0.75" x 150
 Protofoam Billet 1" x 1" x 1" x 50
 Double Sided Tape x 5

CURRICULUM PACKAGES



10 Hour Milling Curriculum and Consumables

Milling Curriculum CD (10 Hour)
 QuickCAM 2D Design (site licence)
 CNC Milling Basics Software
 Consumables Package 10 Hour Milling (50 Student)
 Engraving Cutter 0.4mm (1/64") 1/8" Shank 45 Degree
 Toolholder 1/8" Dia Bore
 Swarf Brush, Scissors, Safety Glasses x 2, 6" Steel Ruler

PKM10



30 Hour Milling Curriculum and Consumables

Milling Curriculum CD (30 Hour)
 CNC Milling Basics Software
 Consumables Package 30 Hour Milling (50 Student)
 Milling Vice
 Swarf Brush, Scissors, Safety Glasses x 2, 6" Steel Ruler
 3" Engineers Square, Ball Pein Hammer 1/4oz

PKM30



40 Hour Milling Curriculum and Consumables

Milling Curriculum CD (10 Hour)
 Milling Curriculum CD (30 Hour)
 CNC Milling Basics Software
 Consumables Package 10 Hour Milling (50 Student)
 Consumables Package 30 Hour Milling (50 Student)
 Milling Vice
 Swarf Brush, Scissors, Safety Glasses x 2, 6" Steel Ruler
 3" Engineers Square, Ball Pein Hammer 1/4oz

PKM40

Denford Consumables

TOOLING, CONSUMABLES & CURRICULUM PACKAGES



10 Hour Router Curriculum and Consumables

PKR10

Router Curriculum CD (10 Hour)
 DXF Graphics CD (10 Hour Curriculum)
 QuickCAM 2D Design (site licence)
 Consumables Package 10 Hour Router (50 Students)
 5/32" Dia. 1/4" Shank Router Plunge Bit
 Safety Glasses x 2



10 Hour Turning Curriculum and Consumables

PKT10

Turning Curriculum CD (10 Hour)
 QuickTURN 2D Design (site licence)
 Consumables Package 10 Hour Turning (50 Students)
 Swarf Brush
 6" Steel Ruler
 Safety Glasses x 2



MANUFACTURING PACKAGE

F1 in Schools Car Manufacturing Package

MPF101

F1 Model Block Car Kit x 25 Sets
 F1 in Schools Car Manufacturing Fixture
 Dust Pro 50 Extraction Unit **110v**
 Virtual Wind Tunnel Software (single seat)
 QuickCam Pro (site licence)
 1/4" Dia Ball Nose L/S 2 Flute Cutter (Solid Carbide)
 Paint Stand x 2, Safety Glasses x 2