# Pathfinder Advanced Cutting Technology
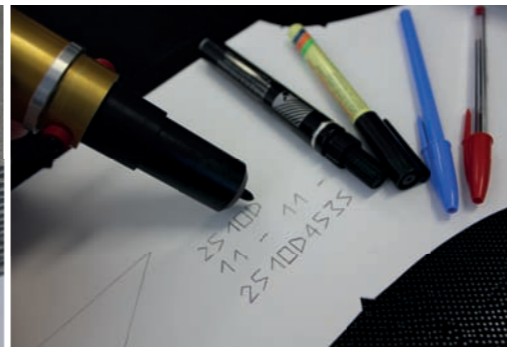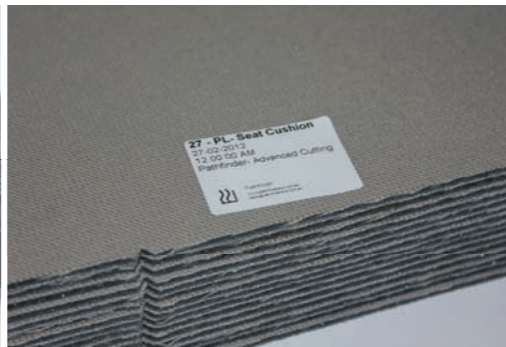
## M-Series

# Pathfinder
### Advanced Cutting Technology

# Introducing the World's most Productive, Reliable and Economical Cutting Machine

**"Design and manufacture the world's best automatic knife cutting technology"** is the one area of focus that defines everything we do at Pathfinder.
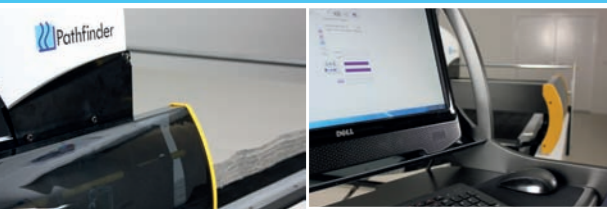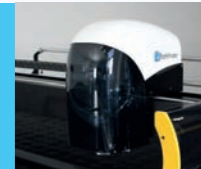
As a smaller more innovative organisation, Pathfinders ability to design solutions around Customer specific applications has resulted in the widest range of productivity enhancing options available in the market place.

Pathfinder's value proposition is simple …. "Design & build the best cutting room technologies, using the highest quality materials, processes and people.

Pathfinder partners with Customers and their applications to provide cutting room solutions that are highly productive and reliable. Importantly Pathfinder machines feature low running costs, minimal maintenance requirements and a long production life.

Customers are provided with a true lowest cost of ownership proposition.

Pathfinder advanced knife cutting machines enable the flexibility to cut; Single Ply, Low Ply and High Ply materials at speeds and accuracy unmatched by others.

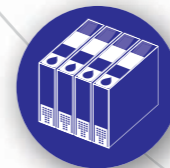| OFD | OFP | MKR | ABR | BCR | IJP | PM | HDC | MTS |
|---|---|---|---|---|---|---|---|---|
| Offload Display | Offload Printer | Marking Tool | Airbrush | Barcode Scanner | Inkjet Printing | Pattern Match Software | Head Camera | Machine Transfer System |
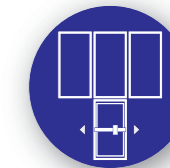
# Technical Specifications



3740

350

A
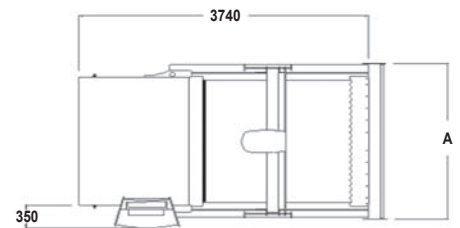
| Characteristics | | M3-180 | M3-220 | M3-390 | M5-180 | M5-220 | M5-390 | M7-180 | M7-220 | M7-390 |
|---|---|---|---|---|---|---|---|---|---|---|
| Max Cutting Width | (mm/inch) | 1800 / 71 | 2260 / 89 | 3900 / 153 | 1800 / 71 | 2260 / 89 | 3900 / 153 | 1800 / 71 | 2260 / 89 | 3900 / 153 |
| Cutting Height - max. *(Compressed)* | (mm/inch) | 30 / 1.2 | 30 / 1.2 | 30 / 1.2 | 50 / 2 | 50 / 2 | 50 / 2 | 70 / 2.8 | 70 / 2.8 | 70 / 2.8 |
| Spread Height - max. | (mm/inch) | 100 / 3.9 | 100 / 3.9 | 100 / 3.9 | 120 / 4.7 | 120 / 4.7 | 120 / 4.7 | 140 / 5.5 | 140 / 5.5 | 140 / 5.5 |
| Cutting Speed - max. *(Per Minute)* | (m/inch) | 48 / 1888 | 48 / 1888 | 48 / 1888 | 48 / 1888 | 48 / 1888 | 48 / 1888 | 48 / 1888 | 48 / 1888 | 48 / 1888 |
| Acceleration - max. | (mps²/g) | 5 / 0.51 | 5 / 0.51 | 5 / 0.51 | 5 / 0.51 | 5 / 0.51 | 5 / 0.51 | 5 / 0.51 | 5 / 0.51 | 5 / 0.51 |
| Width 'A' | (mm/inch) | 2350 / 92.5 | 2800 / 110 | 4440 / 175 | 2350 / 92.5 | 2800 / 110 | 4440 / 175 | 2350 / 92.5 | 2800 / 110 | 4440 / 175 |
| Working Height | (mm/inch) | 825-925 / 33-37 | 825-925 / 33-37 | 825-925 / 33-37 | 825-925 / 33-37 | 825-925 / 33-37 | 825-925 / 33-37 | 825-925 / 33-37 | 825-925 / 33-37 | 825-925 / 33-37 |
| Weight | (Kg/Lb) | 1500 / 3300 | 1700 / 3700 | 2600 / 5700 | 1500 / 3300 | 1700 / 3700 | 2600 / 5700 | 1500 / 3300 | 1700 / 3700 | 2600 / 5700 |

| Supply | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Electrical- *(1 x 3 PH, 50/60Hz, 380V-440V)* | (KW/Hp) | 15 / 20 | 15 / 20 | 22 / 30 | 15 / 20 | 15 / 20 | 22 / 30 | 15 / 20 | 15 / 20 | 22 / 30 |
| Compressed Air  *(6CFM, 170ltrs/min)* | (bar/PSI) | 6.9 / 100 | 6.9 / 100 | 6.9 / 100 | 6.9 / 100 | 6.9 / 100 | 6.9 / 100 | 6.9 / 100 | 6.9 / 100 | 6.9 / 100 |

| Operating Environment | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Operational Temperature- max | (°C/°F) | 41 / 104 | 41 / 104 | 41 / 104 | 41 / 104 | 41/104 | 41 / 104 | 41 /1 04 | 41 / 104 | 41 / 104 |
| Humidity - max  *(non-condensing)* | % | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Noise | dBA | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |

## Standard Features

- Windows® operating platform
- Touch Screen user interface (-Y  standard, +Y on request)
- Utility drawer
- Vacuum VSD-Digital Vacuum control
- Vacuum Re-sealing blind
- QuickDraw® automatic diamond sharpening system
- Vacuum filter

### PathCut® cutter software

- Import standard industry files - DXF, ISO RS274d, ESSI
- Automatic cutting window conveyor advance calculation
- Full screen and zoom graphic display mode
- Display selection of cut order and piece identification
- Vacuum Economiser® power saving function
- Self diagnostic system
- Operator programmable 'end cut'
- Cutting small pieces first - user definable
- Automatic compensation for knife/diamond sharpening stone wear
- Pre-set cutting parameters
- MultiCut™ queuing of nested files
- QuickPath™ automatic cut piece ordering to reduce dry haul
- Visual marker display with scrolling facility
- Automatic Selvage waste cut at programmable intervals
- Comprehensive Self Diagnostics
- Self Adjusting software parameters optimising cut quality
- Marker manipulation features, notch selection, rotation, flip, drill ommission, scaling etc…
- PPR - Pathfinder Proportional Reciprocation
- Automatic lay width checking
- System history file - production cut file verification
- Power Fail Re-start sequence - automatic operator prompts
- Maintenance Manager - automatic reporting of maintenance requirements and schedule
- Head parking - user definable
- Automatic conveyor advance pause - user definable
- Units display in metric, imperial/yards and inches
- Automatic proportional slow down of cutting within critical areas

## Options

- MTS (Machine Transfer System) - allows machine to move laterally to service multiple tables
- PM (Pattern Match) - for matching patterns to stripes, motifs and pre-printed textiles
- BCR (Barcode Scanner) - automatic opening of production cut request
- PRM (Production Manager) -  integrated production reporting
- PRA (Production Analyst) - remote access to production manager data - standalone software
- IKP (IceKnife-Pump) - computer controlled lubricant onto the knife to reduce fusing between parts
- IKA (IceKnife-Air) - controlled delivery of air onto knife to cool and reduce fusing between parts
- HDC (Head Camera) - camera dynamically interacts with PathCut for Matching and other functions
- DRG (Drag Knife) - ultra fine cutting tool for specialty materials
- DR2 (Secondary Drilling Unit) - for drilling multiple hole sizes simultaneously
- AFP (Automatic Foor pressure) - for special applications requiring multiple foot pressures
- CRT (Crease Tool) - creating crease lines or kerf cutting
- PTW (PathWorks®) integrated within PathCut® enabling pattern creation and nesting

### Marking/Identification

- IJP (Ink-Jet) - mounted inside the cutting head used for printing part identification
- MRK (Marking) - tool holder accepting a variety of standard marking pens-seam lines/text etc.
- ABR (Airbrush) - non contact paint marking for difficult materials such as fibreglass
- OFD (Offload Display) - synchronised display of delivered cut parts
- OFP (Offload Printer) - thermal self adhesive label synchronised with OFD and delivered cut parts



# Pathfinder
### Engineered with care for the Environment

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### Advanced Cutting Technology

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