

Product Brochure For M650

## BF-20LV - Opti-Mill Drill - Geared & Tilting Head

Table Travel: (X) - 480mm (Y) - 175mm (Z) - 280mm  
 Electronic Variable Speeds & Dovetail Column

**Ex GST**  
**\$2,190.00**

**Inc GST**  
**\$2,409.00**



OPTIMUM



ORDER CODE:	M650
MODEL:	BF-20LV
Digital Readout:	Optional
Type:	Vertical
Table Size (mm):	700 x 180
Column Type:	Dovetail
Spindle Taper - Vertical:	3MT
Spindle Taper - Horizontal:	~
Longitudinal Travel (X-Axis) (mm):	480
Cross Travel (Y-Axis) (mm):	175
Vertical Travel (Z-Axis) (mm):	280
Type of Slides:	Dovetail
Ram Travel (mm):	~
Spindle to Table (mm):	350
Spindle to Base:	~
Spindle Travel / Diameter (mm):	50 / 60
Throat Depth (max.) (mm):	185
Tilting Head (Left ~ Right):	±90°
Tilting Head (Forward ~ Back):	Fixed
Drilling Capacity (mm):	16
End Milling Capacity (mm):	20
Face Milling Capacity (mm):	63
Power Feed - Quill (mm/rev):	~
Power Feed - Longitudinal (X-Axis) (mm/min):	~
Power Feed - Cross (Y-Axis) (mm/min):	~
Power Feed - Vertical (Z-Axis) (mm/min):	~
Table T-Slot Size (inch / mm):	12
Work Table Load Capacity (kg):	40
Spindle Speeds Vertical (No./ rpm):	Variable (90 - 3000)
Spindle Speeds Horizontal (No./ rpm):	~
Spindle Speeds - Universal Head:	~
Motor Power - Vertical Spindle (kW / hp):	0.85 / 1.13
Motor Power - Horizontal Spindle (kW / hp):	~
Motor Power - Universal Head:	~
Voltage / Amperage (V / amp):	240 / 10
Nett Weight (kg):	162

### Description

Excellent quality mill drill machine designed for the model engineer

### Features

- Electronic infinitely variable speed
- 3MT spindle taper
- Dovetail vertical Z-Axis
- Digital readout speed display
- Work light mounted underneath mill head
- Digital depth display with zero reset for quill
- Tilting head to ± 90° from vertical
- 2 speed gearbox (high / low) drive
- Forward and reverse spindle switch
- Scale collars for all Axis are adjustable
- Adjustable dovetail slideways on all 3 axis
- 700 x 180mm cast iron table with T-slots

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- Adjustable table and drill length stops
- Rear slideway covers and slide clamps on all axis
- Metric dial graduations on X & Y-Axis

### Includes

- 3MT x JT6 drill chuck arbor
- Safety cutter guard
- Work light
- Bracket kit for optional digital readout
- 1/2" x 12tpi whitworth drawbar

### Specific Features



Front View



Left View



Safety Cutter Guard



Digital Readout For Quill Depth



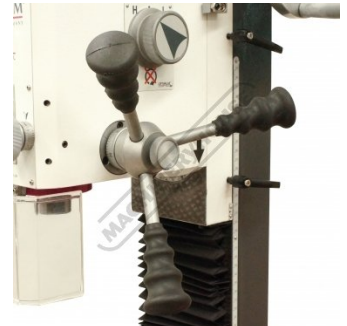
Control Panel with Variable Speed & DRO Display



Quill Fine Feed Adjustment



Milling Table



Quill Handle



High / Low Geared Head Dial



Tilt Head Adjustment



Light



Vertical Axis Scale

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Vertical Axis Height Adjustment



Table Longitudinal Handle



Table Cross Feed Handle



Table Limit Stop



Cross Slideway Cover



Vertical Slideway Cover



Drawbar



Toolbox



Includes Bracket Kit for Optional DRO



Shown on Optional Stand M651



Tilting Head Shown with Optional Stand and DRO



Shown with Optional Stand and DRO



Left View with Optional Stand and DRO



Shown with Optional DRO Left View



Optional Reader Head on Vertical Axis



Optional Cross Feed Reader Head



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Optional Longitudinal Reader Head

**Recommended Accessories**

**M651**  
 Mill Drill Stand



**D695**  
 3-Axis Optimum Digital Readout Counter - 1µm



**D694**  
 1500mm Optimum Magnetic Digital Readout Scale



**T773**  
 Industrial Mobile Tooling Cabinet Workstation



**C922B**  
 Collet & Chuck Set - 8 Piece



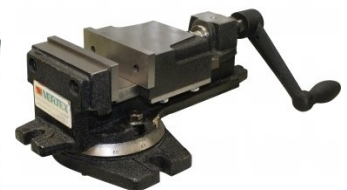
**C926**  
 Collet & Chuck Set - 20 Piece



**C0955**  
 Clamp Kit 58 piece - Workshop Series



**V104**  
 Vertex K-Type Milling Vice Series



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**M3301**  
Metric HSS Slot Drill & End Mill Set - 10 Piece



**M3321**  
Imperial HSS Slot Drill & End Mill Set - 10 Piece



**M182**  
Precision Boring Head Kit



**M192**  
Boring Head Shank



**M180**  
Boring Bar Set - 9 piece



**M250**  
Parallel Set - 8 Piece



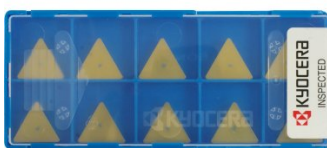
**M530**  
Universal Milling Kit - 4 Piece



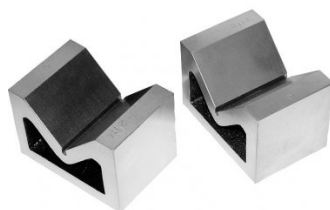
**M528**  
Face Mill 90° - Positive Rake



**L066**  
KYOCERA Carbide Inserts - Milling



**V004**  
Cast Iron Vee Block



**R001**  
Rotary Table



**R005**  
Vertex Rotary Table



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R0014  
 Tilting Rotary Table



P235  
 Coolant Pump & Tank



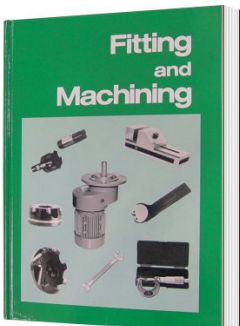
S090A  
 Soluble Metal Cutting Fluid - 1 Litre



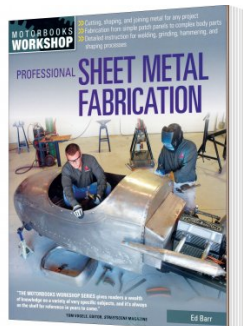
S090  
 Soluble Metal Cutting Fluid - 5 Litre



L341  
 Fitting and Machining Technical Book



L3455  
 Professional Sheet Metal Fabrication Book



M9991  
 Magnetic Floor Sweeper



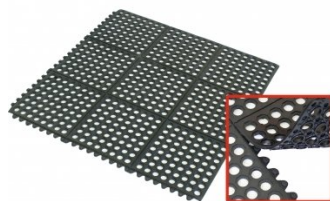
L300  
 Magnetic Swarf Remover



M800  
 Rubber Mat - Anti-Fatigue



M805  
 Rubber Mat - Anti-Fatigue



O000  
 SpillFix Universal Organic Absorbent



O000A  
 Natural Zeolite Absorbent



Product Brochure For M650

O043

Rust & Corrosion Preventive -  
Penetrant & Lubrication



O042

General Purpose Lubricant &  
Corrosion Inhibitor



O040

Rust & Corrosion Preventive -  
Penetrant & Lubrication



O044

Rust & Corrosion Preventive -  
Penetrant & Lubrication

