

DUGARD

Machine Tools That Create Solutions Since 1939

Dugard **RM250RT** Vertical Machining Centre



| Specification | RM160RT | RM250RT |
|-------------------------------|----------------------------------|----------------------------|
| Control | Mitsubishi M720VS | |
| Travel | | |
| X axis | 380mm | 500mm |
| Y axis | 160mm | 250mm |
| Z axis | 380mm | 400mm |
| Spindle nose to table surface | 100~480mm | 125~525mm |
| Table/pallet | | |
| Table size (diameter) | 160mm | 250mm |
| C axis rotation | 360° | 360° |
| B axis swing | +30/-120° | +30/-120° |
| Max loading capacity | 30/66kg | 60/132kg |
| Spindle system | | |
| Spindle motor output (peak) | 10HP | 15HP |
| Spindle speed | 15,000rpm (std), 22,000rpm (opt) | 12,000rpm (std) |
| Spindle taper | HSK-40A/BT30 | HSK-63A/BT40 |
| Method of spindle coolant | Air chilling | Air chilling |
| Feed | | |
| X/Y/Z rapid rate | 60/60/96 m/min | 48/60/96 m/min |
| X/Y/Z acceleration | 1.2/1.2/1.6 G | 1.2/1.0/1.2 G |
| Accuracy | | |
| Positioning (+/-) | 0.006mm | 0.006mm |
| Repeatability (+/-) | 0.003mm | 0.003mm |
| ATC | | |
| Tool storage capacity | 24+1 | 24+1 |
| Max tool diameter | 50mm | 75mm |
| Max length | 175mm | 200mm |
| Max weight | 2.5kg | 4.5kg |
| Change time | T-T: 0.7 sec, C-C: 2.1 sec | T-T: 1.2 sec, C-C: 2.9 sec |
| General | | |
| Coolant tank capacity | 160L | 160L |
| Power requirement | 12KVA | 26KVA |
| Air pressure requirement | 6kg | 6kg |
| Floor space (W x L) | 1600 x 2322mm | 1900 x 2677mm |
| Weight | 4000kg | 5000kg |

Roller Cam Drive

A new concept moving away from worm gear drive.

The application of "Roller Cam" transmission eliminates backlash and reduces friction enabling the unit to operate accurately and smoothly for much longer periods without maintenance.

Faster and More Accurate Rotary Gear Cam

+200%
efficiency increased

100rpm

33rpm

Rotation speed

General B/C Axis B/C Axis of RM-RT

| | RM-RT B/C Axis Transmission | Conventional B/C Axis Transmission |
|------------------------------|-----------------------------|------------------------------------|
| Contact status | Rolling contact | Slide contact |
| Material of the contact part | HRC60 bearing steel | HB90 Phosphor bronze |
| Preload | Yes | No |
| Transmission efficiency | Excellent | Slow |
| Backlash | 0 backlash | Necessary for rub stroke |
| Indexing accuracy | Under 15 sec | 20 sec (when new produce) |
| High speed possibility | Excellent | Slow |
| Thermal | Low | High |
| Rigidity | High | Low |
| Durability | Excellent | Regular maintenance is necessary |
| Backlash adjustment | Unnecessary | Necessary |