MIKRON MACHINING

DM2 TRANSFER





# DM2 V

Vertical transfer machines

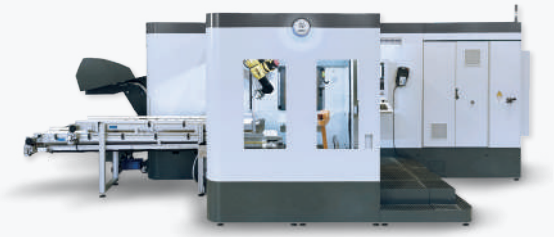
# DM2 machines
## Company overview

Mikron Machining is the leading partner for high performance machining systems to manufacture complex and precise metal components in high volumes. Our machining systems lay the basis to considerably reduce production costs and optimize resource utilization.

With our global presence and our skilled local experts, we are trustfully serving our customers.

Founded in 1985, DM2 joined the Mikron Group in 2024, marking an important step in the expansion of Mikron Machining's rotary transfer machine offering. DM2 specializes in the manufacture of larger, precision components, with particular expertise in fittings and valve applications. Its product portfolio perfectly complements Mikron Machining's existing capabilities, strengthening the ability to serve demanding industries where productivity, accuracy, and reliability are essential.

### DM2 TRANSFER MACHINES



**Vertical transfer machines**

.



**Horizontal transfer machines**



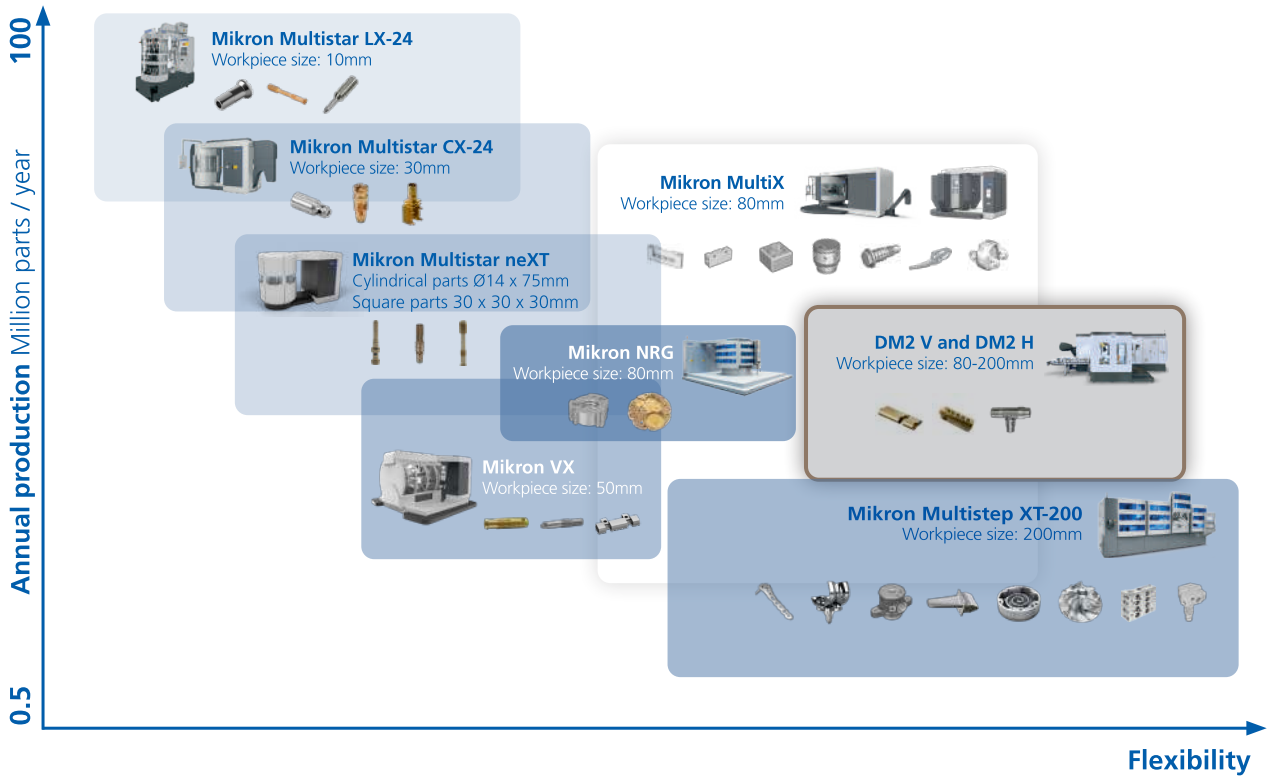
**Technomat (horizontal transfer machine)**

Quality and reliability are at the core of everything we create.

DM2 TRANSFER

# Machining Systems

## Customized high-performance machining solutions




With over 110 years of experience, rooted in Swiss innovation and quality culture, we are a long term process and technology partner to industry leaders. We show passion for precision and reliability in all we do.

### Blank

- Cast
- Bar
- Wire
- etc.

### Pre-machining

- Mikron RP-32
- Mikron TR-42
- Mikron TF-120

### Loading Systems

- Pick & Place
- Robot
- Belt conveyor
- Vibrator
- Pallet

### Machining

- Precise complete machining on Mikron systems
- Dedicated Mikron cutting tools

### Unloading Systems

- Automatic
- Manual
- Deburring
- Washing

Customized high-performance machining solutions with:

- Loading and unloading system
- Pre-processing system
- Dedicated Mikron cutting tools

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# DM2

## Application samples, fittings and valves



4 parts/min

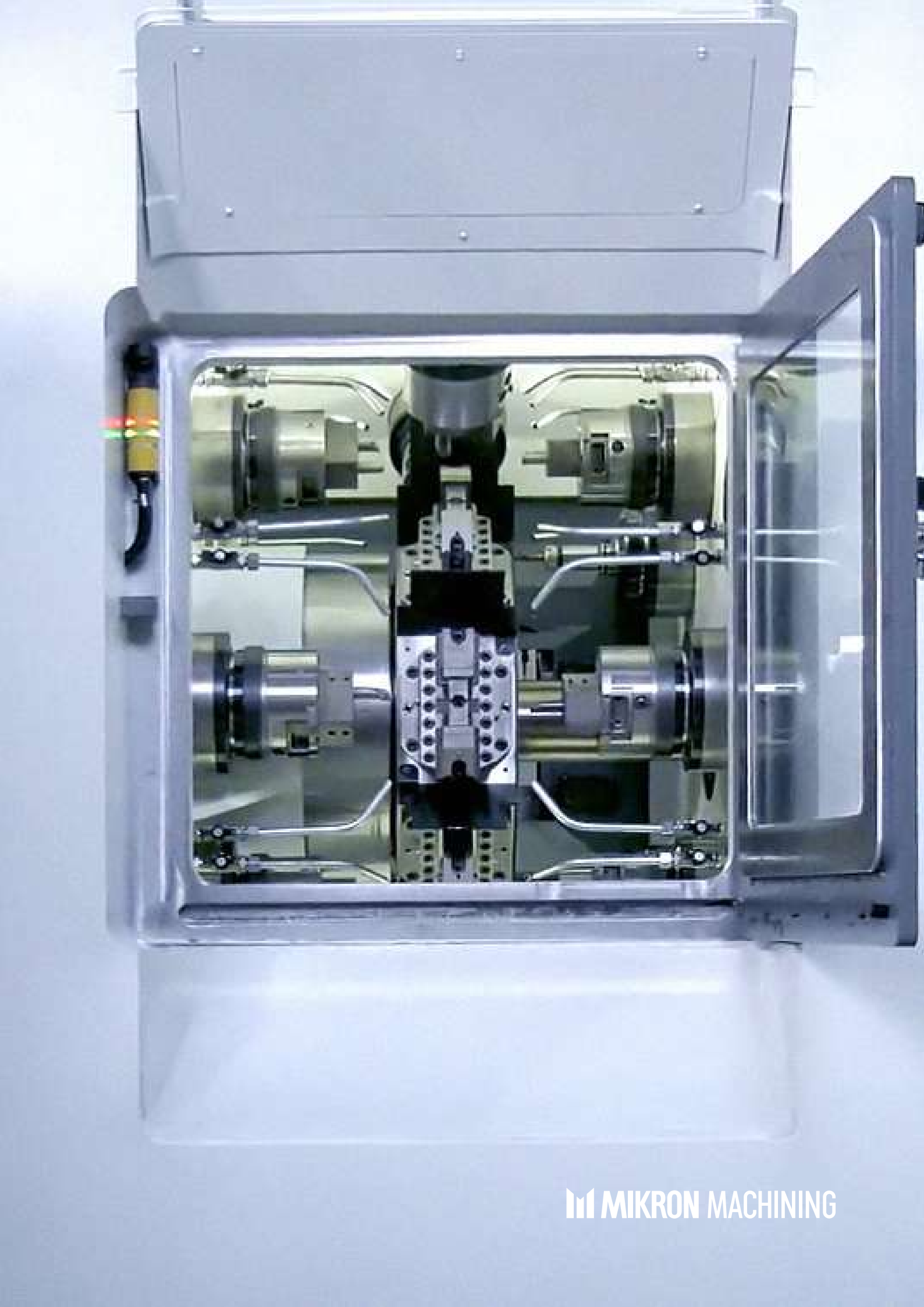


7.5 parts/min



3 parts/min





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# DM2 V
## Vertical table machine



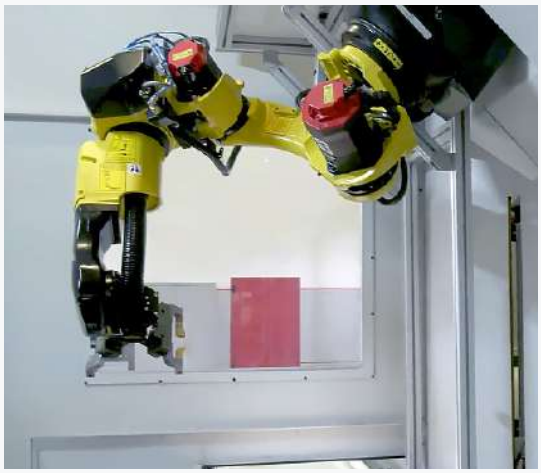
### HIGHLIGHTS

- Vertical table with units from left, right and top
- Very rigid construction, heavy duty recessing head
- From bar stock max dia 70mm or with robot from blank
- Up to 40 parts / min

### TABLE AND INDEXING

Machine type: Vertical table with double or triple hirth system (hirth diameter 400/710mm):

| | |
|---|---|
| Table diameter | Center of clamping device =1350 max |
| Indexing Accuracy | Hirth - double or triple system +/- 0.0015mm |
| Indexing speed Table | 1,2s |
| Number of stations | Maximal 14, 8 – 12 –14 |
| Number of units | Maximal 28 |
| Working room with | 100 x 100 x150 mm |



**Loading and unloading**

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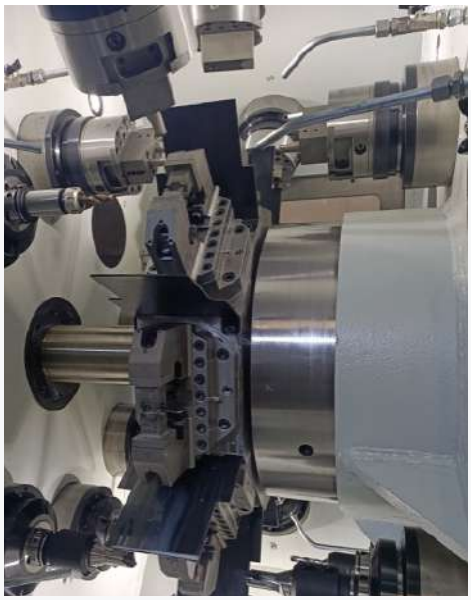
# Product and applications



**Welded structure:** 3m+ height, 20+tons



**Fanuc drives:** Large size





**Spindle and units:** Standard size dia 150 dia.120mm to 250mm

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# DM2 V
## Vertical table machine

### STRAIGHT FITTING

| | |
|---|---|
| Machine type | Vertical table, 14 stations with units dia 120, 16 working units, 1 cut-off, 1 repositioning of part |
| Material | 11SMnPb37 |
| Part size | Hex Profile 55mm (up to 70mm possible) |
| Blank part | Working from hex bar |
| Output | 4.2 parts/min |
| Highlights: | - Working directly from bar stock<br>- Logo engraving onto profile while bar feeding<br>- Very strong recessing unit (spindle dia 160mm) |



### T VALVE (GATE VALVE)

| | |
|---|---|
| Machine type | Vertical table, 8 stations with units dia 150, 8 working units, chuck dia 200 |
| Material | Steel Inox |
| Part size | 1" |
| Blank part | Working from forged part |
| Output | 4 parts/min |
| Highlights: | - Loading with Robot<br>- Thread is milled<br>- Very strong recessing unit (spindle dia 160mm) |



### NUT

| | |
|---|---|
| Machine type | Vertical table, double collet, 12 stations, 18 units |
| Material | Steel |
| Part size | 1" |
| Blank part | Working from 2x hex bar |
| Output | 20-30parts/min (2x 10-15parts/min) |
| Highlights: | - From bar stock<br>- Very strong recessing unit (spindle dia 160mm)<br>- Double clamping |



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# Application samples

## SLEEVE THREADED

| | |
|---|---|
| Machine type | Vertical table |
| Material | Steel and Brass |
| Part size | 1″ |
| Blank part | Working from hex bar |
| Output | 6 parts/min – 7.5 parts/min |
| Highlights: | - From stamped blank<br>- Very strong recessing unit (spindle dia 160mm) |



## SLEEVE

| | |
|---|---|
| Machine type | vertical table, 8 special collet |
| Material | Steel |
| Part size | dia 50 mm – dia 65 mm |
| Blank part | from stamped part |
| Output | 7.5 parts/min – 9 parts/min |
| Highlights: | - From pressed blank<br>- Collet clamping |



## LOCK

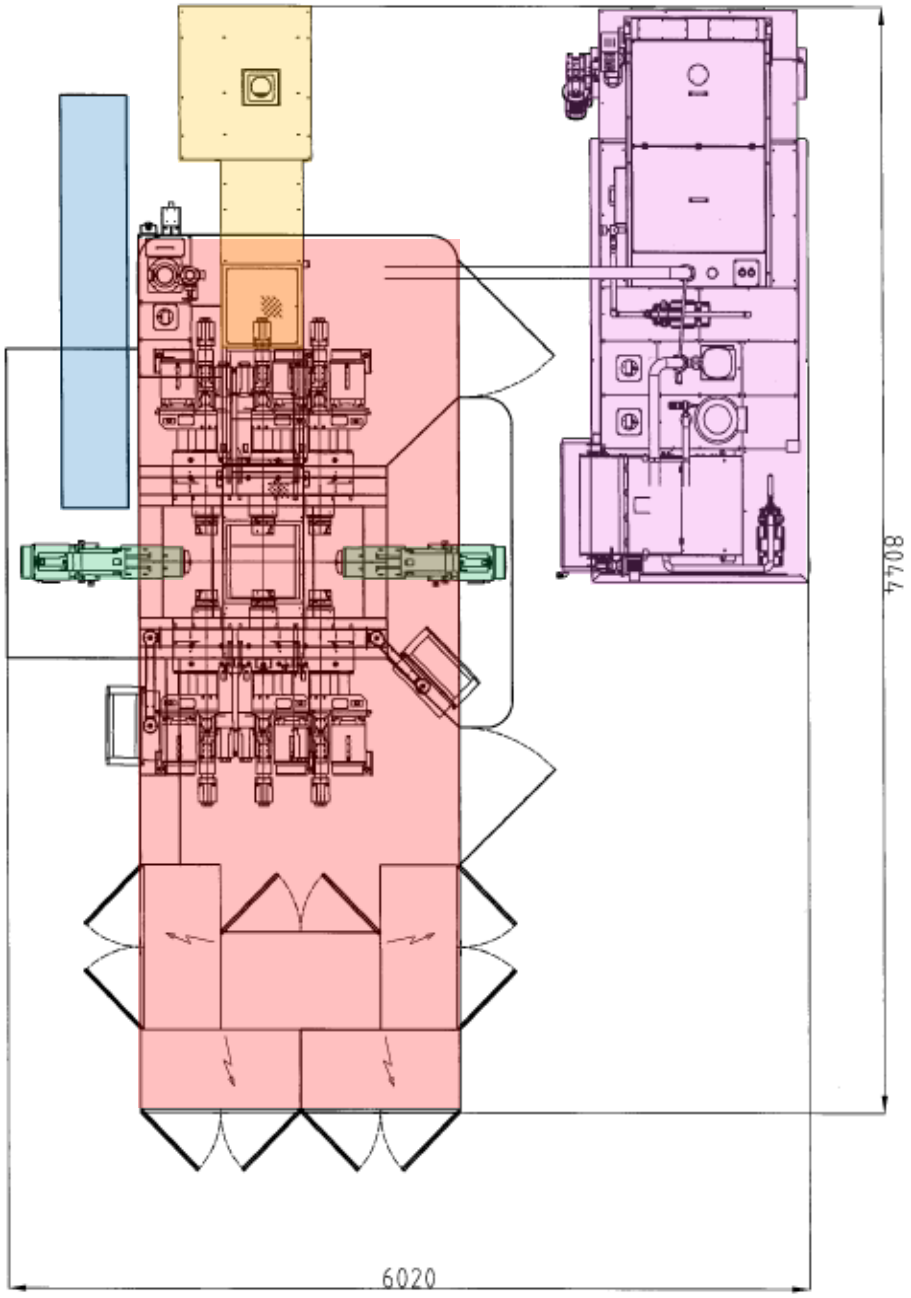
| | |
|---|---|
| Machine type | vertical table, 12 special chucks |
| Material | Brass |
| Part size | dia 14 mm – dia 60 mm |
| Blank part | from bar |
| Output | 6 parts/min – 10 parts/min |





# DM2 V
## Vertical table machine






### LEGEND

- Machine
- Robots
- Belt conveyor
- Chip conveyor
- Oil & Filter system

Weight approx. 25 tons


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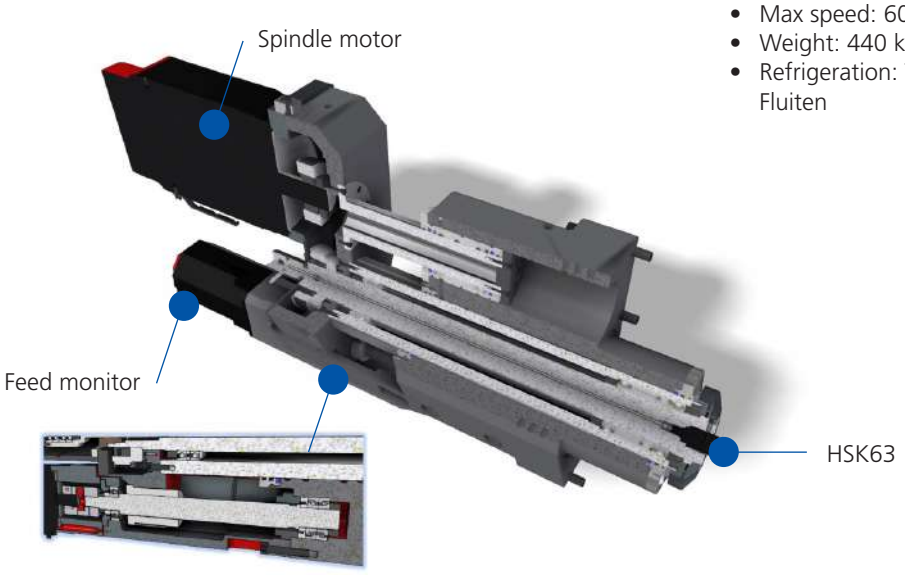
# DM2 V
## Vertical table machine

### HIGHLIGHTS

- Standard units in different sizes
  (example Size 150, others are 100, 125, 160, 200)
- Control Fanuc
- Very rigid grooving and turning head

### STANDARD DRILLING UNIT SIZE 150

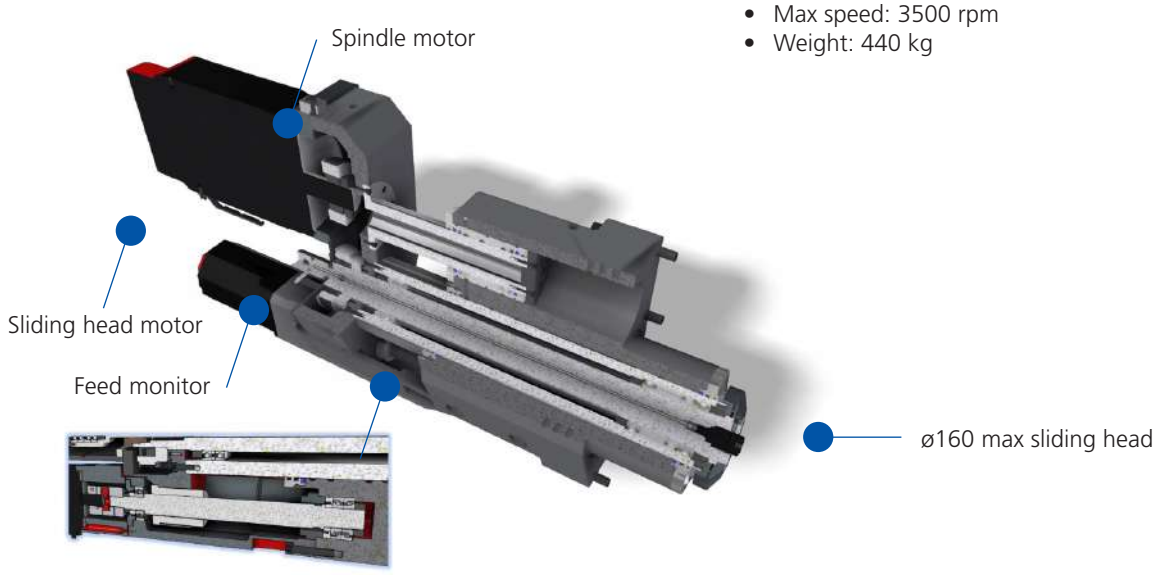
- Sleeve: 0150
- Stroke: 150 mm
- Bearings: 3
- Axial force: 7500 N
- Spindle: 70 Nm - 11 kW (max 15 kW)
- Feed: 20 m/min
- Max speed: 6000 rpm
- Weight: 440 kg
- Refrigeration: Through with Johnson Fluiten



# Standard units size 150

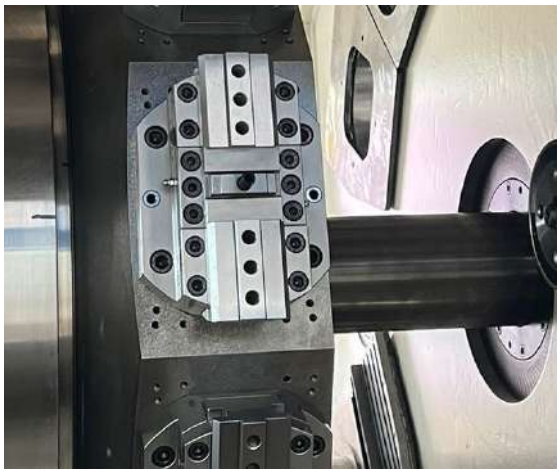
## STANDARD TURNING UNIT SIZE 150

- Sleeve: 0150
- Stroke: 150 mm
- Bearings: 4
- Axial force: 7500 N
- Spindle: 35,81 Nm - 7,5 kW (max 11 kW)
- Feed: 20 m/min
- Max speed: 3500 rpm
- Weight: 440 kg



# DM2 V
## Vertical table machine

Clamping devices



### SELF CENTERING CHUCK, 2 JAWS

| |
|---|
| Base dia. 200-350 mm |
| Stroke: 25/40 mm |
| Range from dia 10 - dia 70 |




### SELF CENTERING CHUCK, 3 JAWS

| |
|---|
| Base dia. 150-260 mm |
| Stroke: 16 mm |
| Range from dia 25 - dia 100 |



### COLLET

# DM2 V
## Vertical table machine

NC control

FANUC Series 30i, ideally suited for complex high-speed, precision machining, equipped with multiple axes and multi-path functionalities



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# Mikron Digital Solutions

## Accelerate your digital journey

Use data, advanced analytics, machine learning and AI to reinvent your manufacturing ecosystem to enable superior outcomes. Mikron Digital Services drive more efficient and sustainable operations, greater productivity, customer relevance and growth.

### miTool
The next level of tool monitoring

**Features**
- Tools monitoring system
- Up to 200 real-time monitored channels
- Breakage control and wear detection
- Artificial intelligence algorithms
- End of life prediction and reporting
- Optimized machine stops
- Adaptive control
- Waveforms history database
- Events notification

### miConnector
The machine data connected

**Features**
- Machine data gateway
- Data sharing with customer PDA via OPC-UA protocol
- Ready for cloud data exchange, via MQTT protocol
- Security guarantee by data encryption
- Connect directly to your machine controller
- Different protocol available for controller connection
- Optionally collect Input signals (e.g. sensors) from field

### miMachine
The machine life cycle

**Features**
- Web based dashboards
- Machine & peripheries status
- Production and reporting (OEE)
- Condition monitoring with notifications
- Failures analysis (pareto)
- Tools life history
- DB for data persistence
- Digital BoM and serial Nr. management
- Back-end integration with Mikron ERP

### miMaintenance
The maintenance by usage

**Features**
- Machine maintenance management
- Automated machine expertise for maintenance by usage
- Machine's devices life status and performance
- Real-time condition monitoring
- Anomalies detection and notification
- Artificial intelligence algorithms
- Support for preventive maintenance planning
- Components end of life prediction and reporting
- Back-end integration with Mikron ERP

### miEnergy
The energy consumption management

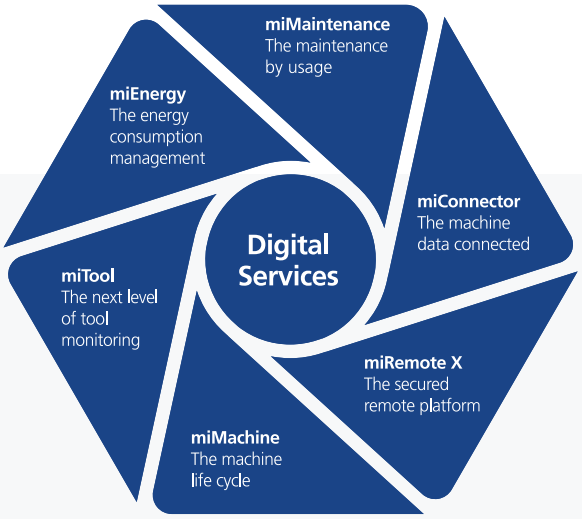
**Features**
- Energy consumption monitoring system
- Machine and peripheries status
- Focus on $CO_2$ footprint reduction
- Different characteristic (current, air, oil, water, waste, temps)
- Anomalies detection
- Machine consumption dashboards, report and data collection
- Adaptive control based on real needs
- Energy consumption improvement replacing old/obsolete parts
- Consulting, redesign and process improvements to reduce waste

### miRemote X
The secured remote platform

**Features**
- Secure connection based on OpenVPN standard
- Relies on secured Cloud for performance and security
- Certified process in accordance with IEC 62443-4-1
- Customer is in control to give access to the machine
- Connection reporting and traffic monitoring
- PSIRT (Product Security Incident Response Team) monitors vulnerabilities daily
- Regular security updates of the platform and of the specific devices

Your complete digital toolbox from sensor to AI.

A modular portfolio designed to enhance efficiency, quality, and process stability.




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## Mikron Machining

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