

DOOSAN



VC 430/VC 510

High Productivity Twin Table Vertical
Machining Center



**MACHINE
GREATNESS™**

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VC 430 / VC 510

The VC430/VC510 twin table vertical machining center provides features to optimize high precision during long periods of operation. These machines are based on a moving column structure, and by utilizing the rapid workpiece change by rotating pallet and high powered spindle, productivity is maximized.



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High-rigidity and Column-moving Structure

High-rigidity cast structure is excellent for vibration absorption and minimizes deformation under heavy load. The column moving design guarantees high accuracy even after a prolonged period of operation and minimizes footprint.

High-speed Auto Pallet Changer

The dual table equipped with standard auto-indexing pallet enables stable positioning and improved productivity with minimized idle time.

Convenience

Diverse optional features are available for customized requirements.

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The high rigidity machine structure maintains stable accuracy for long periods even during heavy duty cutting.

Stable column moving structure

The moving column structure eliminates the root causes of fatigue and vibration caused by high frequency rapid movements over long periods of running and optimizes durability and accuracy. The machine footprint is also minimized.



Axis Feed System

High-precision feed structure

Roller-type Linear Guideway and the highly rigid coupling are adopted for improving rigidity and accuracy of the linear feed system in X, Y and Z directions. The nut cooling system minimizes thermal displacement of the ball screw to satisfy the speed and the accuracy requirements.

High-rigidity Roller Type Linear Guideway



Rigidity and accuracy of feed system are improved with Roller Type LMG and Coupling.



Roller type linear guideway

| Description | | X | Y | Z |
|-------------|----------------------------------|------------|------------|------------|
| VC 430 | Travels (mm)(inch) | 560(22.0) | 430(16.9) | 570(22.4) |
| | Rapid traverse rate (m/min)(imp) | 40(1574.8) | 40(1574.8) | 36(1417.3) |
| VC 510 | Travels (mm)(inch) | 762(30.0) | 516(20.3) | 570(22.4) |
| | Rapid traverse rate (m/min)(imp) | 40(1574.8) | 40(1574.8) | 32(1259.8) |

Tool Changer

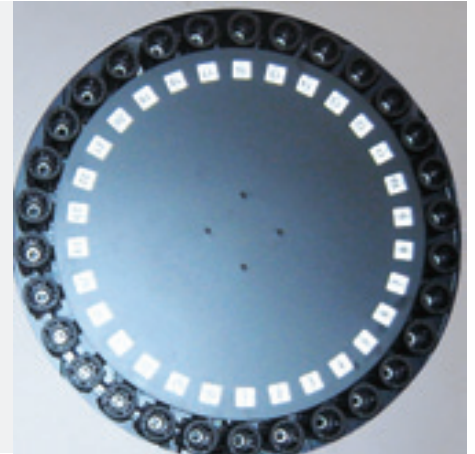
Tool magazine

The drum-shape tool magazine mounted on the right of the machine is driven by the motor and the cam to guarantee high reliability. The magazine can be expanded to hold maximum 40 tools when optionally selected.

Tool storage capacity

30 Tools

40 Tools option



Automatic tool changer

Rapid tool change at speed of 3 seconds for T-T-T to enhance productivity. The drum-shape ATC mounted on the right of the machine is interoperated with the CAM.

Tool change time (T-T-T)

1.3 / 1.6 s option

Tool change time (C-T-C)

4.3 / 4.6 s option



Pallet

Automatic Rapid Pallet Changer (APC)

- The dual table with the standard automatic indexing pallet is of rack & pinion type and rotates through 180 degrees. It features a 6 ton clamping force.
- The table with the horizontal machine bed directly connected allows stable positioning and minimal non-cutting time to improve productivity.
- Hydraulic lines for fixtures and electrical cables for rotary tables can be supplied via the central column of the indexing pallet, thus allowing pallet rotation whilst maintaining services connection.

| Model | VC 430 | VC 510 |
|-------------------------|--|--|
| Pallet change time | 5 s | 5.5 s |
| Pallet loading capacity | 2-300 kg (2-661.4 lb) | 2-350 kg (2-771.6 lb) |
| Pallet size | 2-712 × 490 mm (2-28.0 × 19.3 inch) | 2-860 × 570 mm (2-33.9 × 22.4 inch) |





Spindle

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The high speed spindle maintains accuracy during fine machining and also provides sufficient power for heavy duty cutting performance.

High-Speed, High-Precision Spindle

The high-speed spindle of 10,000 (12,000) rpm is supported high-precision bearing for ensuring stable accuracy under high speed cutting operation. In addition, a spindle motor of higher power is mounted for heavy duty cutting.



High speed spindle

10000 r/min

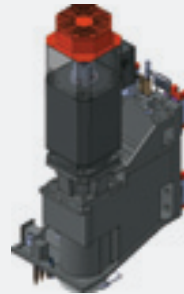
* Belt type

12000 r/min option

* Direct type

Motor power (30min/con.)

18.5 / 15 kW
(24.8 / 20.1 Hp)



High torque spindle

6000 r/min option

* Belt type

* Only VC 510

Motor power (30min/con.)

15/11 kW
(20.1 / 14.8 Hp)



Spindle Head Cooling System

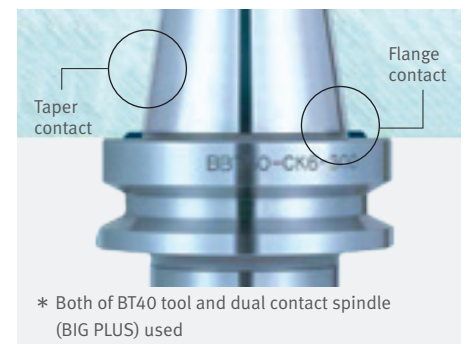
The spindle cooling system maintains temperature relative to the ambient value and circulates cooling oil around the bearings to reduce thermal growth due to high speed running over long periods.



* Not available for 6000 rpm.

Dual Contact Spindle

Tool rigidity is enhanced by the firm clamping of the spindle. Tool lifecycle and cut-surface roughness have been improved as a result of the reduced vibration realized by the dual contact spindle.



* Both of BT40 tool and dual contact spindle (BIG PLUS) used



Cutting Performance

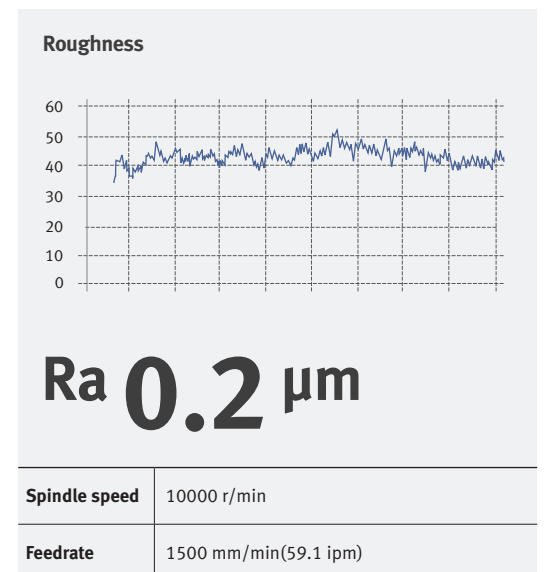
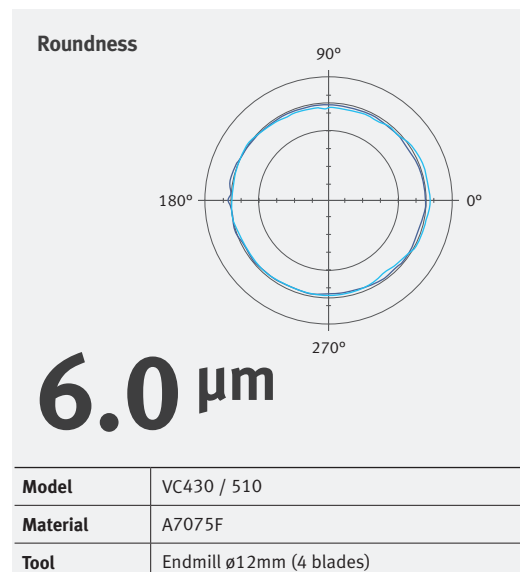
VC 430 / VC 510

Delivers excellent performance under diverse machining conditions.

| | | | |
|--|--------------------------|---------------------------|--|
| Face mill Carbon steel (SM45C) | | | |
| ø80mm Face mill (6Z) | | | |
| Machining rate (cm ³ /min(inch ³ /min)) | Spindle speed (r/min) | Feedrate (mm/min(ipm)) | |
| 432(26.4) | 1500 | 2700(106.3) | |
| Face mill Gray casting (GC25) | | | |
| ø80mm Face mill (6Z) | | | |
| Machining rate (cm ³ /min(inch ³ /min)) | Spindle speed (r/min) | Feedrate (mm/min(ipm)) | |
| 691(42.2) | 1500 | 3600(141.7) | |
| Face mill Aluminum (AL6061) | | | |
| ø80mm Face mill (6Z) | | | |
| Machining rate (cm ³ /min(inch ³ /min)) | Spindle speed (r/min) | Feedrate (mm/min(ipm)) | |
| 1785(108.9) | 1500 | 5580(219.7) | |
| End mill Carbon steel (SM45C) | | | |
| ø30mm Endmill (6Z) | | | |
| Machining rate (cm ³ /min(inch ³ /min)) | Spindle speed (r/min) | Feedrate (mm/min(ipm)) | |
| 36(2.2) | 222 | 80(3.1) | |
| U-drill Carbon steel (SM45C) | | | |
| Machining rate (cm ³ /min(inch ³ /min)) | Spindle speed (r/min) | Feedrate (mm/min(ipm)) | |
| 172(10.5) | 750 | 84(3.3) | |
| Tap Carbon steel (SM45C) | | | |
| Tool | Spindle speed (r/min) | Feedrate (mm/min(ipm)) | |
| M30 x P3.5 | 212 | 742(29.2) | |

* The results, indicated in this catalogue are provides as example. They may not be obtained due to differences in cutting conditions and environmental conditions during measurement.

Machining Accuracy



* The results, indicated in this catalogue are provides as example. They may not be obtained due to differences in cutting conditions and environmental conditions during measurement.



Standard/Optional Specifications

Diverse optional features are available to meet specific customer requirements.

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● Standard ○ Optional X N/A

| NO. | Description | Features | VC 430 | VC 510 |
|-----|---|-------------------------------------|--------|--------|
| 1 | Air blower | | ○ | ○ |
| 2 | Air gun | | ○ | ○ |
| 3 | Auto tool changer | 30 Tools | ● | ● |
| 4 | | 40 Tools | ○ | ○ |
| 5 | Coolant chiller | | ○ | ○ |
| 6 | Coolant gun | | ○ | ○ |
| 7 | Coolant tank | | ● | ● |
| 8 | Coolant level switch : Sensing level - Low / High | | ○ | ○ |
| 9 | Data server | NONE | ● | ● |
| 10 | | FUNCTION & MEMORY CARD_1GB | ○ | ○ |
| 11 | Electric cabinet air conditioner | | ○ | ○ |
| 12 | Electric cabinet light | | ○ | ○ |
| 13 | Electric cabinet line filter | | ○ | ○ |
| 14 | Hydraulic fixture interface | NONE | ● | ● |
| 15 | | A LINE_1 PAIR_EACH PALLET | ○ | ○ |
| 16 | MPG | 1 MPG_PORTABLE TYPE | ● | ● |
| 17 | | 1 MPG_PORTABLE_W/ENABLE TYPE | ○ | ○ |
| 18 | NC system | DOOSAN FANUC i | ● | ● |
| 19 | NC system lcd size | 8.4 inch (Color) | ● | ● |
| 20 | | 10.4 inch (Color) | ○ | ○ |
| 21 | Oil cooler | 6000 r/min | X | X |
| 22 | | 10000 r/min | ● | ● |
| 23 | | 12000 r/min | ● | ● |
| 24 | Oil Skimmer | Belt type | ○ | ○ |
| 25 | Pallet type | 2_30-M16 X P2.0 TAP | ● | X |
| 26 | | 2_4-100 X 18H8 T-SLOTS | ○ | X |
| 27 | | 2_42-M16 X P2.0 TAP | X | ● |
| 28 | | 2_5-100 X 18H8 T-SLOTS | X | ○ |
| 29 | Pneumatic fixture interface | P/T LINE_1 PAIR_EACH PALLET | ● | ● |
| 30 | | A/B LINE_1 PAIR_EACH PALLET | ○ | ○ |
| 31 | Power transformer | | ○ | ○ |
| 32 | Rigid tapping | | ● | ● |
| 33 | Shower coolant | NONE | ● | ● |
| 34 | | 1.1 kW_0.1MPA_200L/MIN_220V | ○ | ○ |
| 35 | Spindle motor power | 15/11 kW | X | ○ |
| 36 | | 18.5/15 kW | ● | ● |
| 37 | Spindle speed | 6000 r/min | X | ○ |
| 38 | | 10000 r/min | ● | ● |
| 39 | | 12000 r/min | ○ | ○ |
| 40 | Test bar | | ○ | ○ |
| 41 | Through spindle coolant | NONE | ● | ● |
| 42 | | 1.5 KW_2.0 MPA | ○ | ○ |
| 43 | | 4.0 KW_2.0 MPA | ○ | ○ |
| 44 | | 5.5 KW_7.0 MPA_DUAL BAG FILTER | ○ | ○ |
| 45 | Work & tool counter | WORK / TOOL | ○ | ○ |
| 46 | Customized Special Option | COOLANT SYSTEM - HIGH PRESSURE TSC1 | ○ | ○ |
| 47 | | APPLY GREASE LUBRICATION | ○ | ○ |

* Please contact DOOSAN to select detailed steady rest specifications.

Optional Equipments

A wide range of solutions are available that can be optimized to suit customers specific need.

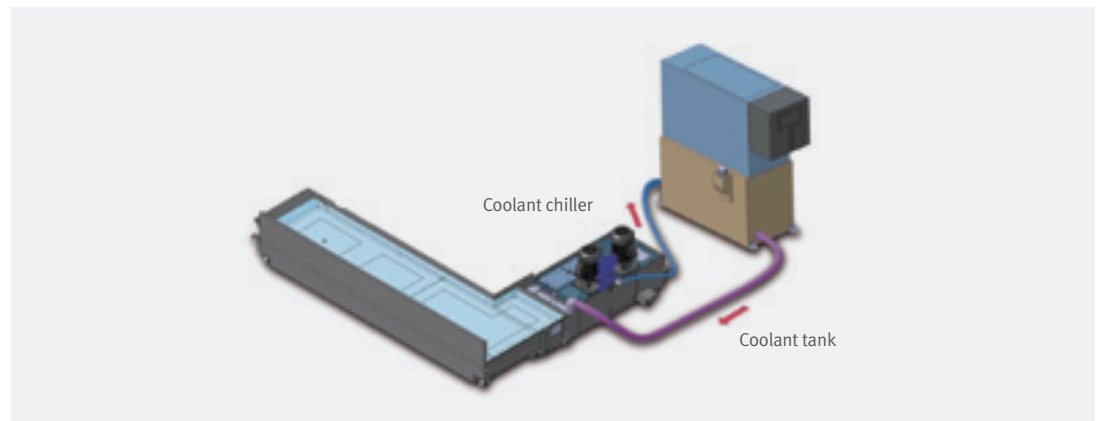
Through-spindle coolant spray system option

Coolant supply around the spindle nose is standard equipment. The coolant tank is separated from the machine structure to prevent heat transfer. Through spindle coolant (TSC) is an option.



Coolant Chiller (strongly recommended) option

Heat is transferred from the coolant during cutting to the machine structure and can cause thermal deformation. To maintain optimum machining accuracy, a coolant chiller is recommended which recirculates the coolant and controls its temperature. This significantly improves overall precision.



Interface for Additional Equipment (4 Axes)

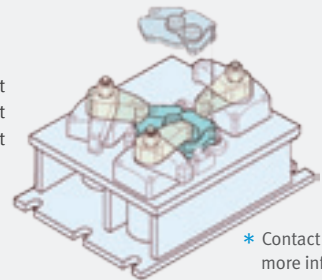
Fixture check list(for hydraulic / pneumatic Fixtures)

- Pressure source

| | | |
|-----------|------------------------------|------------------------------|
| Hydraulic | <input type="checkbox"/> P/T | <input type="checkbox"/> A/B |
| Pneumatic | <input type="checkbox"/> P/T | <input type="checkbox"/> A/B |
- Hydraulic power unit

| | | |
|----------------|---|---------------------------------|
| Supply scope : | <input type="checkbox"/> User | <input type="checkbox"/> DOOSAN |
| | <input type="checkbox"/> Use Doosan standard unit 24L / min, 4.9 MPa | |
| | <input type="checkbox"/> Special requirement _____ L / min, _____ MPa | |
- Number of ports_Each Pallet

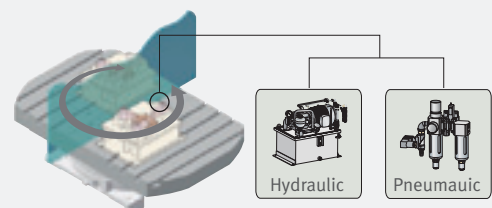
| |
|---|
| <input type="checkbox"/> 1pair(2-pt1/4" port)_each pallet |
| <input type="checkbox"/> 2pair(4-pt1/4" port)_each pallet |
| <input type="checkbox"/> 3pair(6-pt1/4" port)_each pallet |



* Contact Doosan for more information

Hydraulic fixture line

Pneumatic or hydraulic lines supply power from a central power pack to fixtures on each side of the indexing pallet via the center of the table. Various numbers of supply lines and operating pressures are available.



Recommended Rotary Table Size
VC 430 : Ø170mm (Ø6.7 inch) / VC 510 : Ø200mm (Ø7.9 inch)



DOOSAN Fanuc i Plus

15 inch screen + New OP

DOOSAN Fanuc i Plus' operation panel enhances operating convenience by incorporating common-design buttons and layout, and features the Qwerty keyboard for fast and easy operation.

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DOOSAN Fanuc i Plus is optimized for maximizing customer productivity and convenience.

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DOOSAN Fanuc i Plus

- 15 inch color display
Intuitive and user-friendly design


USB & PCMCIA card QWERTY keyboard

- EZ-guide i standard
- Ergonomic operator panel
- 2MB Memory
- Hot key

1. MPG handle



2. Tool magazine button



Magazine : Magazine :
CW CCW


3. PCMCIA Card & USB Port

PCMCIA Card

The PCMCIA card enables uploading and downloading of the NC program, NC parameters, tool information, and ladder programs, and also supports DNC operation.

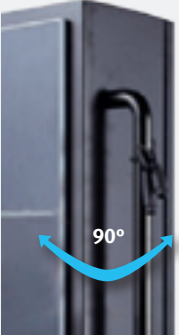
USB Port

The USB memory stick enables uploading and downloading of the NC program, NC parameters, tool information and ladder programs. (DNC operation is not supported.)



4. Swiveling operation panel

The operation panel is capable of swiveling by 90 degrees to enhance convenience.

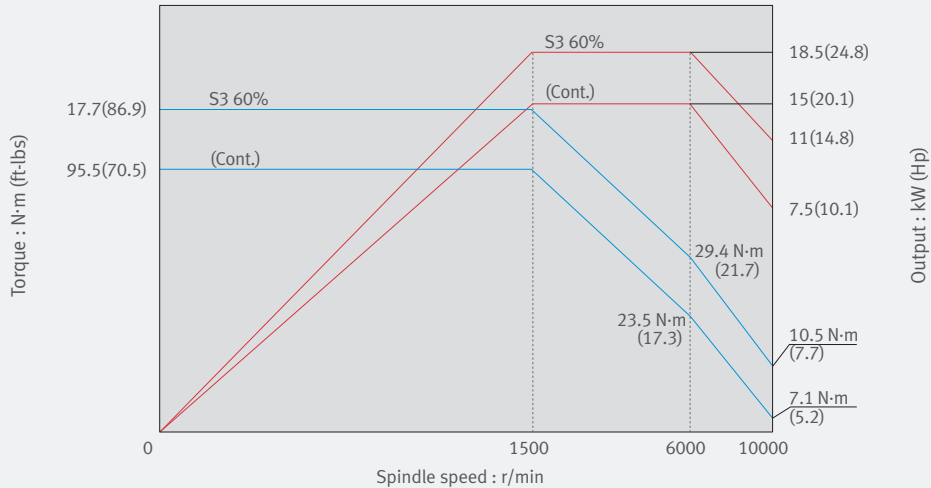


Spindle Power – Torque Curve

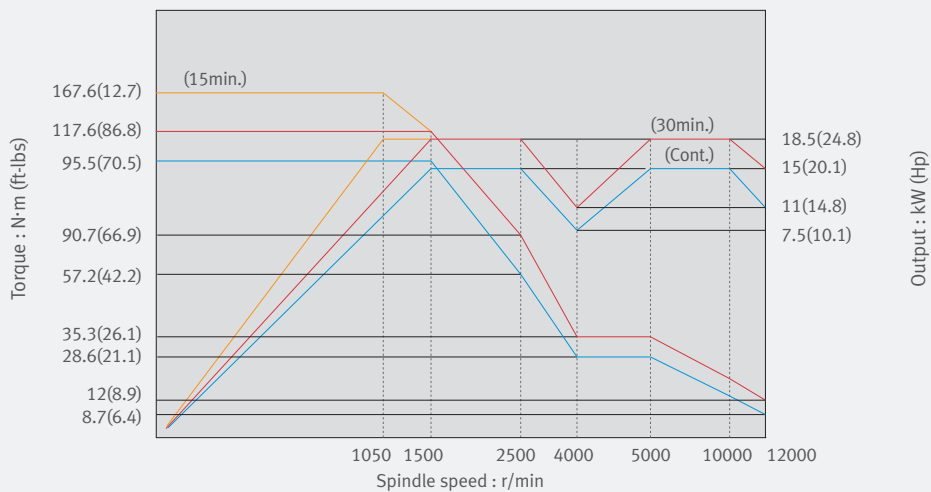
VC 430 / VC 510

High speed spindle

Max. spindle speed : 10000 r/min
 Spindle motor power : 18.5 / 15 kW (24.8 / 20.1 Hp)

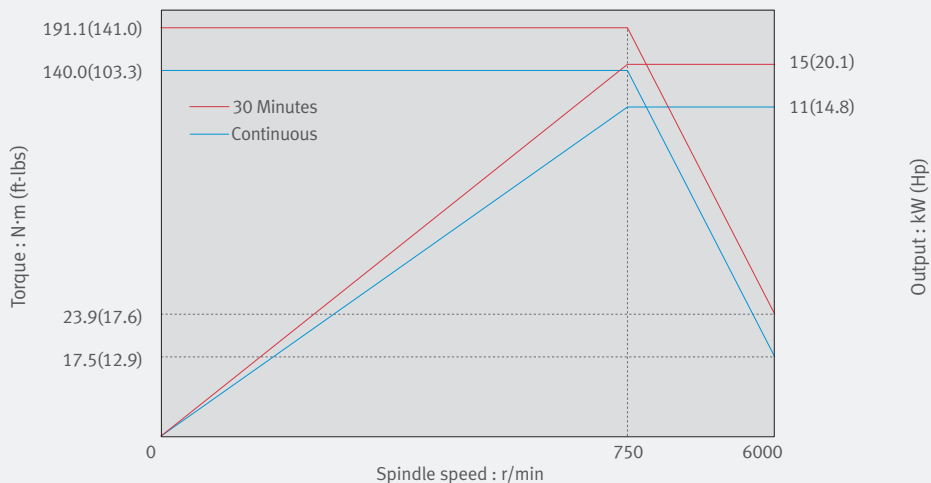


Max. spindle speed : 12000 r/min
 Spindle motor power : 18.5 / 15 kW (24.8 / 20.1 Hp) **option**



High torque spindle

Max. spindle speed : 6000 r/min
 Spindle motor power : 15 / 11kW (20.1 / 14.8 Hp) **option**
 (Only VC 510)



External Dimensions

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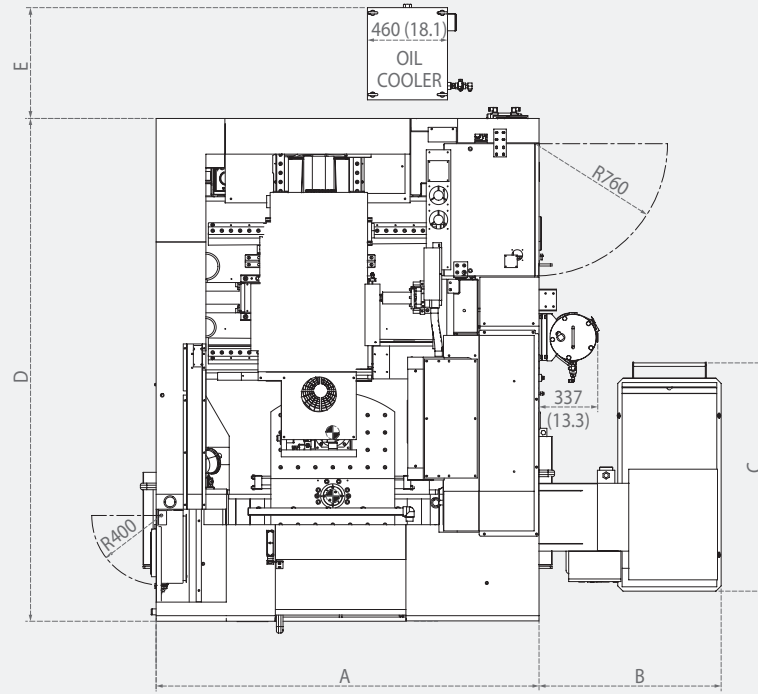
Unit : mm (inch)

Detailed Information

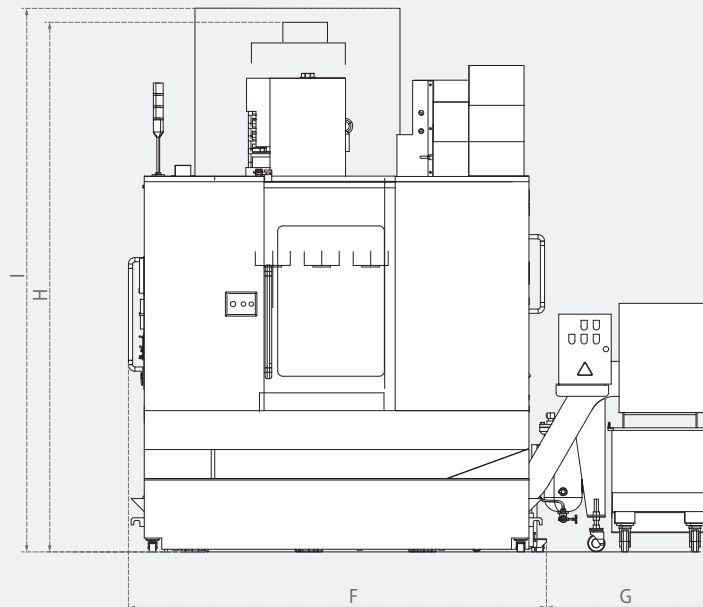
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Top view



Front View



| Item | Unit | A | B | C | D | E | F | G | H | | | I |
|--------|--------|--------------|-------------|-------------|--------------|------------|--------------|-------------|--------------|--------------|----------------|---|
| | | | | | | | | | Belt type | Direct type | With top cover | |
| VC 430 | mm | 2200 (86.6) | 1046 (41.2) | 1312 (51.7) | 2890 (113.8) | 637 (25.1) | 2391 (94.1) | 946 (37.2) | 2738 (107.8) | 3030 (119.3) | 3110 (122.4) | |
| VC 510 | (inch) | 2580 (101.6) | 1100 (43.3) | | 3260 (128.3) | 590 (23.2) | 2580 (101.6) | 1100 (43.3) | 2830 (111.4) | 3130 (123.2) | 3250 (128.0) | |

VC 430 /
VC 510

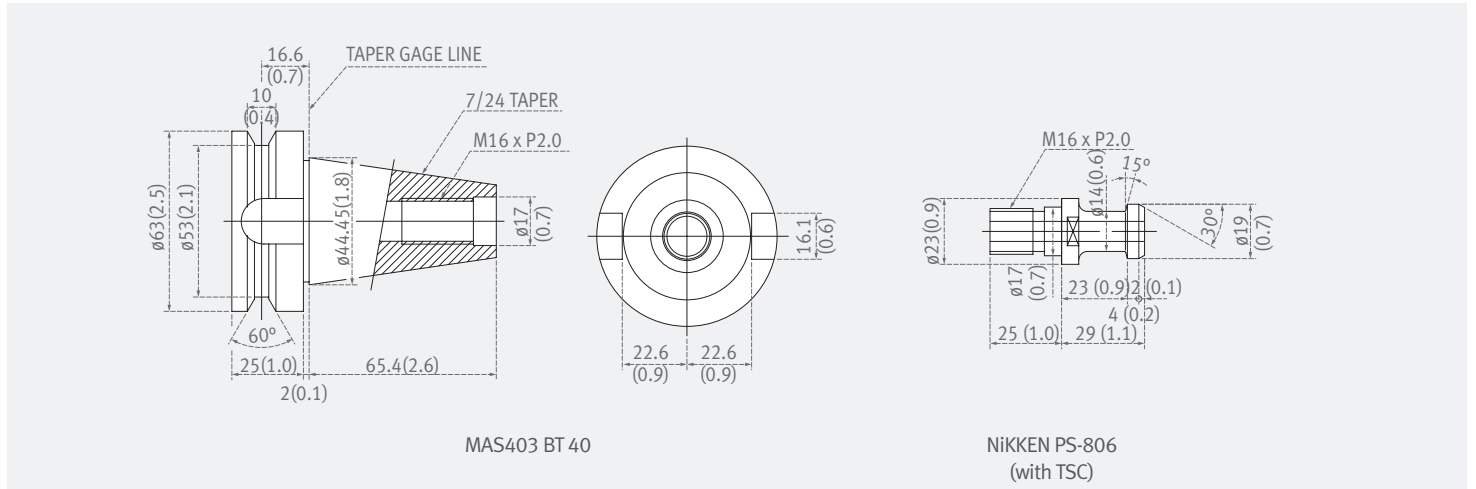
* Some peripheral equipment can be placed in other places

Tool Shank

Tool shank

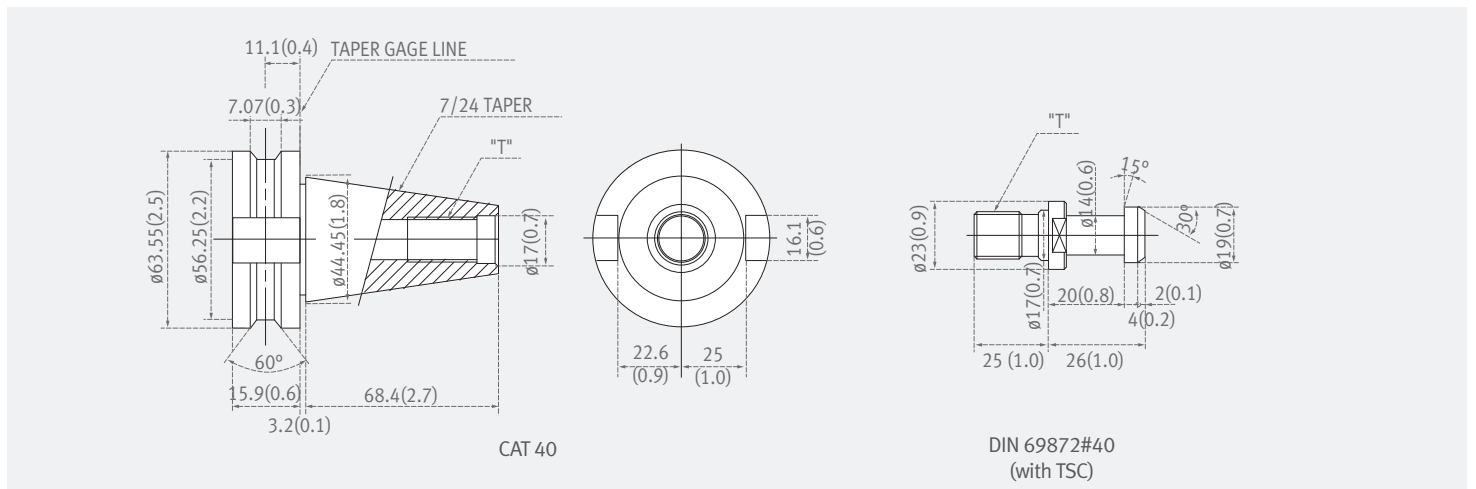
BT

Unit : mm (inch)



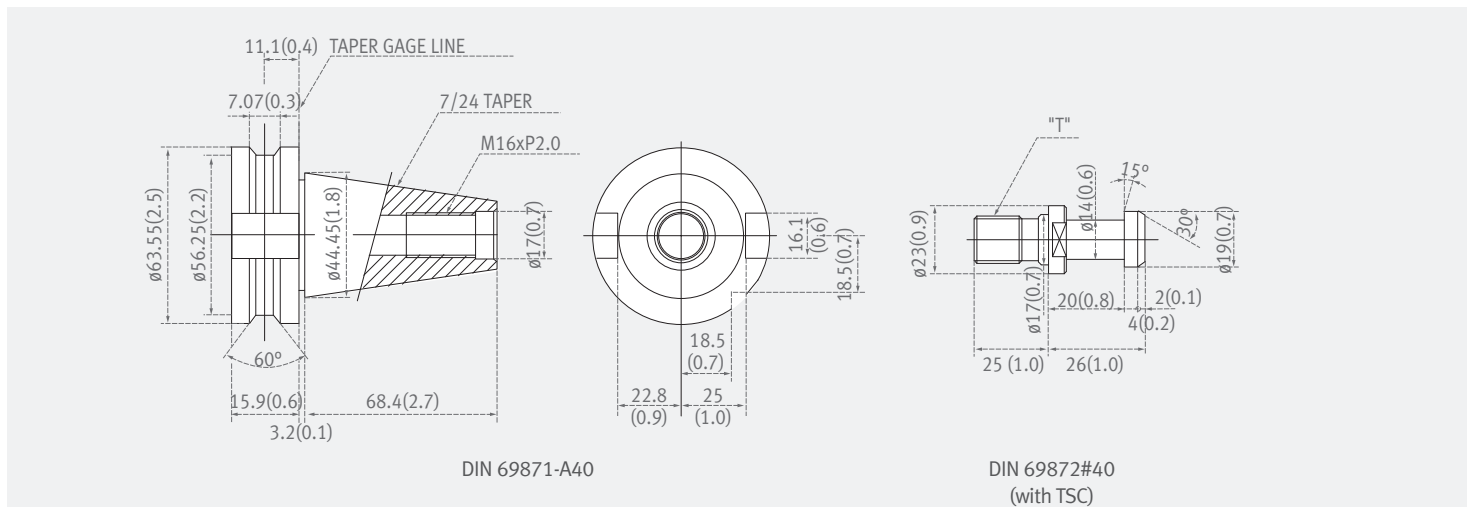
CAT option

Unit : mm (inch)



DIN option

Unit : mm (inch)



Pallet dimension

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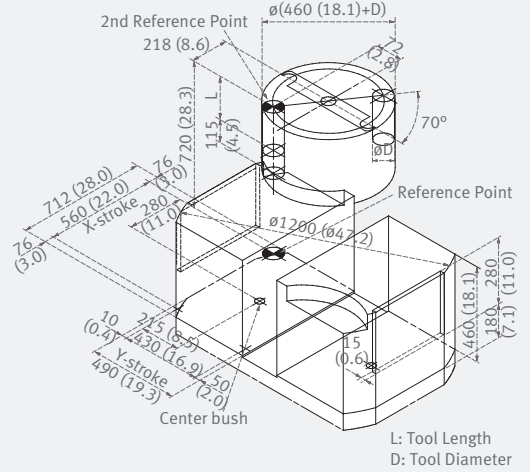
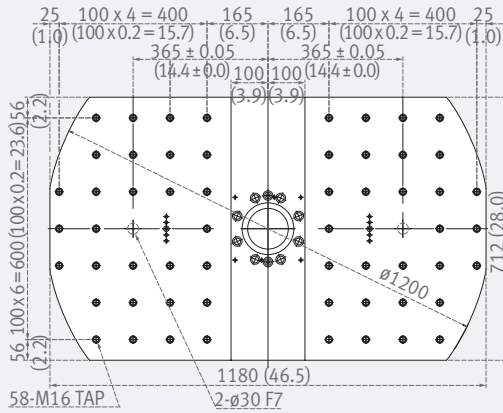
VC 430

Unit : mm (inch)

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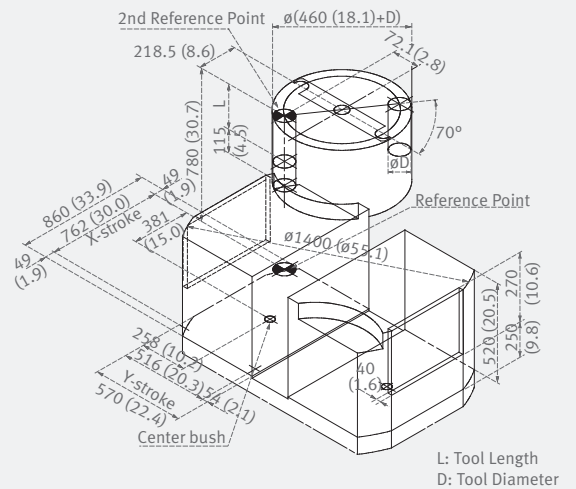
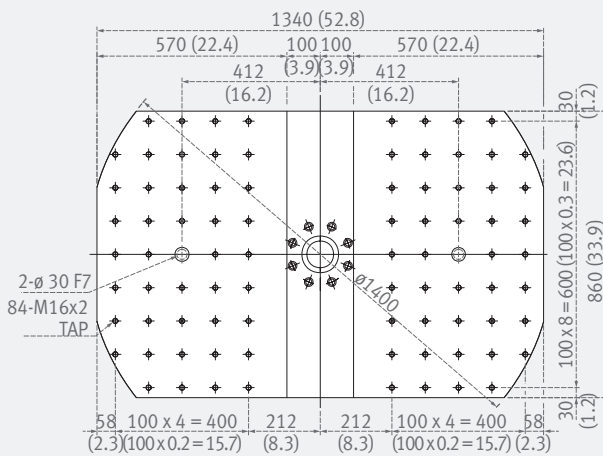
Customer Support Service



* If the size of the workpiece is larger than the indicated limit, it may collide with the column, ATC, splash guard, etc.

VC 510

Unit : mm (inch)



* If the size of the workpiece is larger than the indicated limit, it may collide with the column, ATC, splash guard, etc.

Machine Specifications



| Features | | Unit | VC 430 | VC 510 |
|--------------------------|---|--------------|--|---|
| Travels | X-axis | mm (inch) | 560 (22.0) | 762 (30.0) |
| | Y-axis | mm (inch) | 430 (16.9) | 516 (20.3) |
| | Z-axis | mm (inch) | 570 (22.4) | |
| | Distance from spindle nose to table top | mm (inch) | 150 (5.9) ~ 720 (28.3) | 210 (8.3) ~ 780 (30.7) |
| | Distance from spindle center to column guideway | mm (inch) | 495 (19.5) | 530 (20.9) |
| Feedrate | Rapid traverse rate (X / Y / Z) | m/min (ipm) | 40 / 40 / 36 (1574.8 / 1574.8 / 1417.3) | 40 / 40 / 32 (1574.8 / 1574.8 / 1259.8) |
| | Cutting feedrate | mm/min (ipm) | 18000 (708.7) | 16000 (629.9) |
| Pallet | Pallet size | mm (inch) | 2-712 x 490 (2-28.0 x 19.3) | 2-860 x 570 (2-33.9 x 22.4 inch) |
| | Pallet loading capacity | kg (lb) | 2-300 (2-661.4) | 2-350 (2-771.6) |
| | Max. workpiece height | mm (inch) | 460 ⁽¹⁾ (18.1) | 520 ⁽¹⁾ (20.5) |
| | Pallet surface | - | 2-29-M16 x P2.0 | 42-M16 x P2.0 Taper |
| Spindle | Max. spindle speed | r/min | 10000 {12000}* | 10000 {6000, 12000}* |
| | Spindle taper | - | ISO #40 7/24 Taper | |
| | Max. spindle torque | N·m(ft-lbs) | 117.7 {167.6}* (86.9 {123.7}) | 117.7 {191.1, 167.6}*(86.9 {141.0, 123.7}) |
| Automatic tool changer | Type of tool shank | - | MAS403 BT40 | |
| | Tool storage capacity | ea | 30 {40}* | |
| | Max. tool diameter (without adjacent tools) | mm (inch) | 80 {76}* (125) (3.1 {3.0} (4.9)) | |
| | Max. tool length | mm (inch) | 220 ⁽²⁾ (8.7) / 300 ⁽³⁾ (11.8) | |
| | Max. tool weight | mm (inch) | 8 (0.3) | |
| | Max. tool moment | N·m(ft-lbs) | 5.88 (4.3) | |
| | Tool change time (tool-to-tool) | s | 60Hz {50Hz}* : 1.3 {1.6}* | |
| | Tool change time (chip-to-chip) | s | | |
| Automatic pallet changer | Number of pallet | ea | 2 | |
| | Pallet change time | s | 5 | 5.5 |
| Motor | Spindle motor | kW (Hp) | 18.5 / 15 (24.8 / 20.1) | 18.5 / 15 (24.8 / 20.1) (10000, 12000 r/min) 15 / 11(20.1 / 14.8) (6000 r/min) |
| | Feed motor (X / Y / Z) | kW (Hp) | 4.0 / 4.0 / 4.0 (5.4 / 5.4 / 5.4) | |
| Power source | Electric power supply (rated capacity) | kVA | 40.2 (10000 r/min) 35.1 (12000 r/min) | 39.4 (6000 r/min) 40.2 (10000 r/min) 35.1 (12000 r/min) |
| | Compressed air supply | MPa | 0.54 | |
| Tank capacity | Coolant tank capacity | L (galon) | 300 (79.3) | 420 (111.0) |
| | Lubrication tank capacity (available) | L (galon) | 2 (0.5) | |
| Machine Dimensions | Height | mm (inch) | 3110 (122.4) | 3250 (128.0) |
| | Length | mm (inch) | 2960 (116.5) | 3260 (128.3) |
| | Width | mm (inch) | 2391 (94.1) | 2671 (105.2) |
| | Weight | kg (lb) | 7800 (17195.8) | 9200 (20282.2) |
| Control | NC system | | DOOSAN Fanuc i Plus | |

* { } : Optional

(1) This value is the maximum for the height of rectangular without interference of ATC operating.

(2) Available with pallet change.

(3) Available in tool magazine.

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| Item | Spec. | DOOSAN Fanuc i Plus | | |
|-------------------------------|---|---|---------|---|
| AXES CONTROL | Controlled axes | 3 (X,Y,Z) | X, Y, Z | |
| | Additional controlled axes | 5 axes in total | ○ | |
| | Least command increment | 0.001 mm / 0.0001" | ● | |
| | Least input increment | 0.001 mm / 0.0001" | ● | |
| | Interpolation type pitch error compensation | | ● | |
| INTERPOLATION & FEED FUNCTION | 2nd reference point return | G30 | ● | |
| | 3rd / 4th reference return | | ● | |
| | Inverse time feed | | ● | |
| | Cylindrical interpolation | G07.1 | ● | |
| | Helical interpolation B | Only Fanuc 30i | - | |
| | Smooth interpolation | | - | |
| | NURBS interpolation | | - | |
| | Involute interpolation | | - | |
| | Helical involute interpolation | | - | |
| | Bell-type acceleration/deceleration before look ahead interpolation | | ● | |
| | Smooth backlash compensation | | ○ | |
| | Automatic corner override | G62 | ● | |
| | Manual handle feed | Max. 3unit | 1 unit | |
| | Manual handle feed rate | x1, x10, x100 (per pulse) | ● | |
| | Handle interruption | | ● | |
| | Manual handle retrace | | ○ | |
| | Manual handle feed 2/3 unit | | - | |
| | Nano smoothing | AI contour control II is required. | ○ | |
| | AI APC | 20 BLOCK | - | |
| | AICC I | 30 BLOCK | - | |
| | AICC I | 40 BLOCK | X | |
| | AICC II | 200 BLOCK | ● | |
| | AICC II | 400 BLOCK | ○*1) | |
| | High-speed processing | 600 BLOCK | - | |
| | Look-ahead blocks expansion | 1000 BLOCK | - | |
| | DSQ I | AICC II (200block) + Machining condition selection function | - | |
| | DSQ II | AICC II (200block) + Machining condition selection function + Data server(1GB) | - | |
| | DSQ III | AICC II with high speed processing (600block) + Machining condition selection function + Data server(1GB) | - | |
| | SPINDLE & M-CODE FUNCTION | M- code function | | ● |
| | | Retraction for rigid tapping | | ● |
| Rigid tapping | | G84, G74 | ● | |
| TOOL FUNCTION | Number of tool offsets | 64 ea | - | |
| | Number of tool offsets | 99 ea | - | |
| | Number of tool offsets | 200 ea | - | |
| | Number of tool offsets | 400 ea | 400 ea | |
| | Number of tool offsets | 499 / 999 / 2000 ea | - | |
| | Tool nose radius compensation | G40, G41, G42 | ● | |
| | Tool length compensation | G43, G44, G49 | ● | |
| | Tool life management | | ● | |
| | Addition of tool pairs for tool life management | | ● | |
| | Tool offset | G45 - G48 | ● | |

| Item | Spec. | DOOSAN Fanuc i Plus | |
|--|--|------------------------------------|----------|
| PROGRAMMING & EDITING FUNCTION | Custom macro | ● | |
| | Macro executor | ○ | |
| | Extended part program editing | ● | |
| | Part program storage | 256KB (640m) | - |
| | Part program storage | 512KB (1,280m) | X |
| | Part program storage | 1MB (2,560m) | - |
| | Part program storage | 2MB (5,120m) | 5,120m |
| | Part program storage | 4MB (1,0240m) | - |
| | Part program storage | 8MB (2,0480m) | - |
| | Inch/metric conversion | G20 / G21 | ● |
| | Number of Registered programs | 400 ea | X |
| | Number of Registered programs | 500 ea | - |
| | Number of Registered programs | 1000 ea | 1000 ea |
| | Number of Registered programs | 4000 ea | - |
| | Optional block skip | 9 BLOCK | ● |
| | Optional stop | M01 | ● |
| | Program file name | 32 characters | - |
| | Program number | 04-digits | ● |
| | Playback function | | ● |
| | Addition of workpiece coordinate system | G54.1 P1 - 48 (48 pairs) | 48 pairs |
| Addition of workpiece coordinate system | G54.1 P1 - 300 (300 pairs) | - | |
| Tilted working plane indexing command | G68.2 | ○ | |
| Tilted working plane indexing function | Programming TWP command on guidance window | ○ | |
| OTHERS FUNCTIONS (Operation, setting & Display, etc) | Embeded Ethernet | ● | |
| | Graphic display | Tool path drawing | ● |
| | Loadmeter display | | ● |
| | MDI / DISPLAY unit | 15" color LCD | ● |
| | | 15" color LCD | X |
| | | 15" color LCD with Touch Panel | X |
| | Memory card interface | | ● |
| | USB memory interface | Only Data Read & Write | ● |
| | Operation history display | | ● |
| | DNC operation with memory card | | ● |
| | Optional angle chamfering / corner R | | ● |
| | Run hour and part number display | | ● |
| | High speed skip function | | ● |
| | Polar coordinate command | G15 / G16 | ● |
| | Polar coordinate interpolation | G12.1 / G13.1 | - |
| | Programmable mirror image | G50.1 / G51.1 | ● |
| | Scaling | G50, G51 | ● |
| | Single direction positioning | G60 | ● |
| | Pattern data input | | ● |
| | Jerk control | AI contour control II is required. | ○ |
| | Fast Data server with 1GB PCMCIA card | | ○ |
| | Fast Ethernet | | ○ |
| | 3-dimensional coordinate conversion | | - |
| | 3-dimensional tool compensation | | - |
| | Figure copying | G72.1, G72.2 | - |
| | Machining time stamp function | | - |
| | Machine alarm diagnosis | | ● |
| | CNC screen display | | ● |
| | CNC screen dual display function | | ● |
| | One touch macro call | | ● |
| Machining quality level adjustment | | ● | |
| EZ Guide i (Conversational Programming Solution) | | ● | |
| iHMI with Machining Cycle | | X | |
| MANUAL GUIDE i | | X | |

*1) AICC2 (400block) of 0iMF must be changed to High Speed Main board. Ask R&D center for information.

Basic information

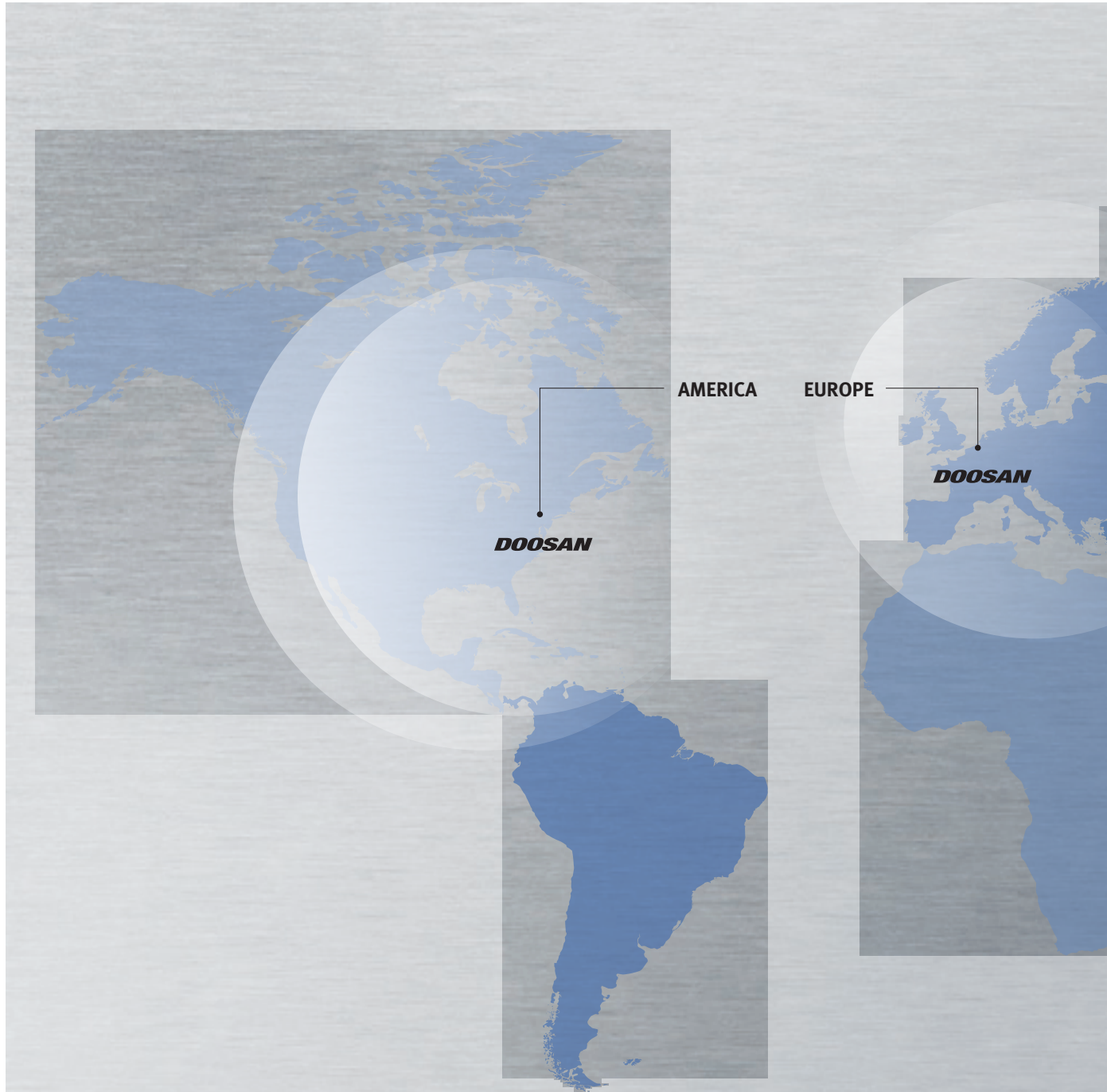
Basic Structure
Cutting
Performance

Detailed Information

Standard/Optional Specifications
Diagram
Machine / NC Unit Specifications

Customer Support Service

Responding to Customers Anytime, Anywhere



Global Sales and Service Support Network

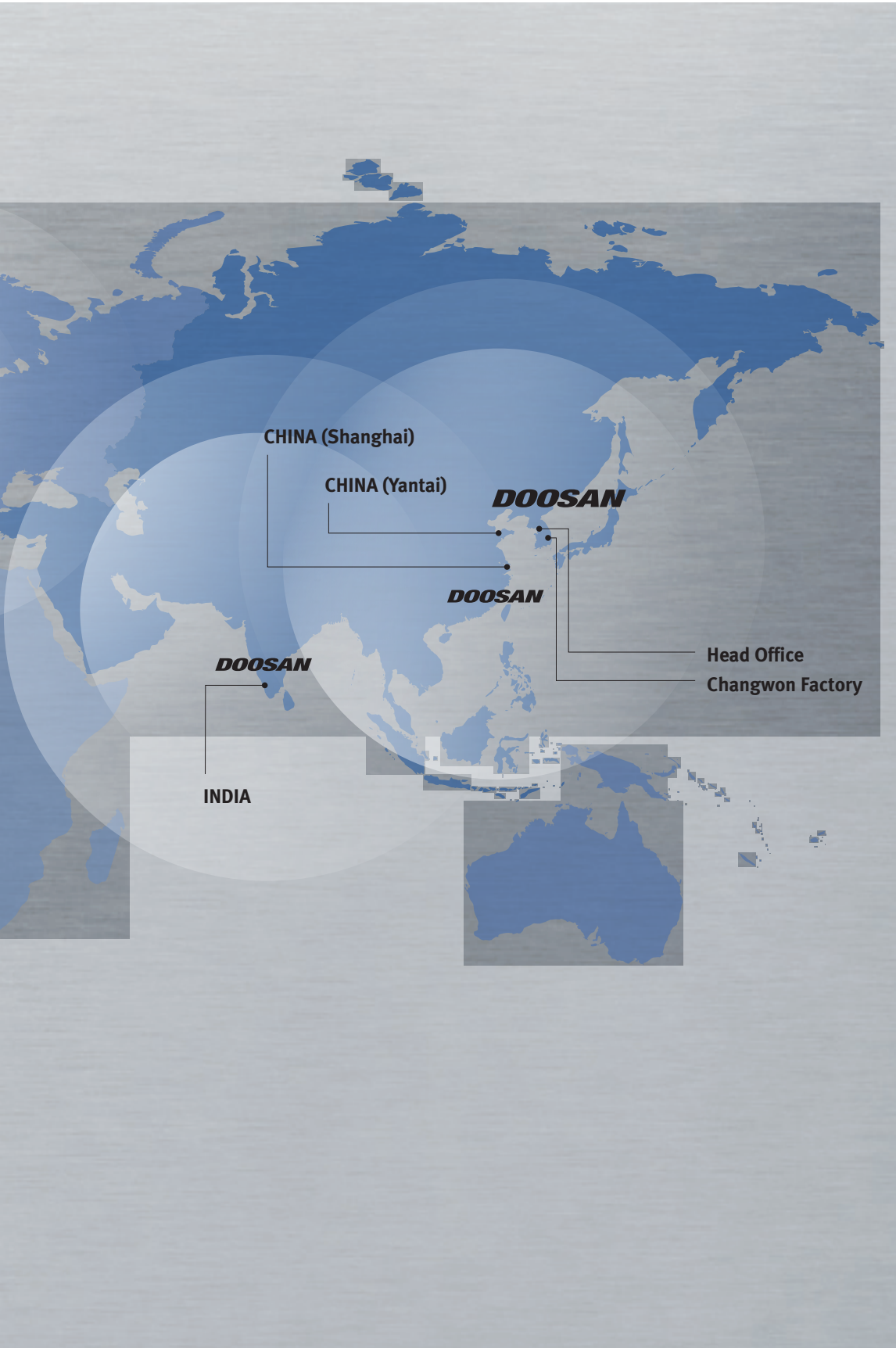
| Corporations | Dealer Networks | Technical Centers | Service Post | Factories |
|--------------|-----------------|-------------------|--------------|-----------|
| 4 | 164 | 51 | 198 | 3 |

Technical Center: Sales Support, Service Support, Parts Support

Doosan Machine Tools' Global Network, Responding to Customer's Needs nearby, Anytime, Anywhere

Doosan machine tools provides a system-based professional support service before and after the machine tool sale by responding quickly and efficiently to customers' demands.

By supplying spare parts, product training, field service and technical support, we can provide top class support to our customers around the world.



Customer Support Service

We help customers to achieve success by providing a variety of professional services from pre-sales consultancy to post-sales support.

Supplying Parts



- Supplying a wide range of original Doosan spare parts
- Parts repair service

Field Services



- On site service
- Machine installation and testing
- Scheduled preventive maintenance
- Machine repair

Technical Support



- Supports machining methods and technology
- Responds to technical queries
- Provides technical consultancy

Training



- Programming / machine setup and operation
- Electrical and mechanical maintenance
- Applications engineering

Major Specifications

VC 430 / VC 510



| Description | Unit | VC 430 | VC 510 |
|---------------------|-----------|---|---|
| Max. spindle speed | r/min | 10000 | |
| Spindle motor power | kW (Hp) | 18.5 / 15 (24.8 / 20.1) | |
| Tool shank | Taper | ISO #40 , 7/24 TAPER | |
| Travels (X / Y / Z) | mm (inch) | 560 / 430 / 570 (22.0 / 16.9 / 22.4) | 762 / 516 / 570 (30.0 / 20.3 / 22.4) |
| Number of tools | ea | 30 | |
| Table size | mm (inch) | 2-712 x 490 (2-28.0 x 19.3) | 2-860 x 570 (2-33.9 x 22.4) |

*(): Option

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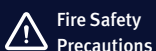
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* For more details, please contact Doosan Machine Tools.

* The specifications and information above-mentioned may be changed without prior notice.

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**Fire Safety
Precautions**

There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting use coolants and modifying the machine without the consent of the manufacturer. Please check the SAFETY GUIDANCE carefully before using the machine.

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