

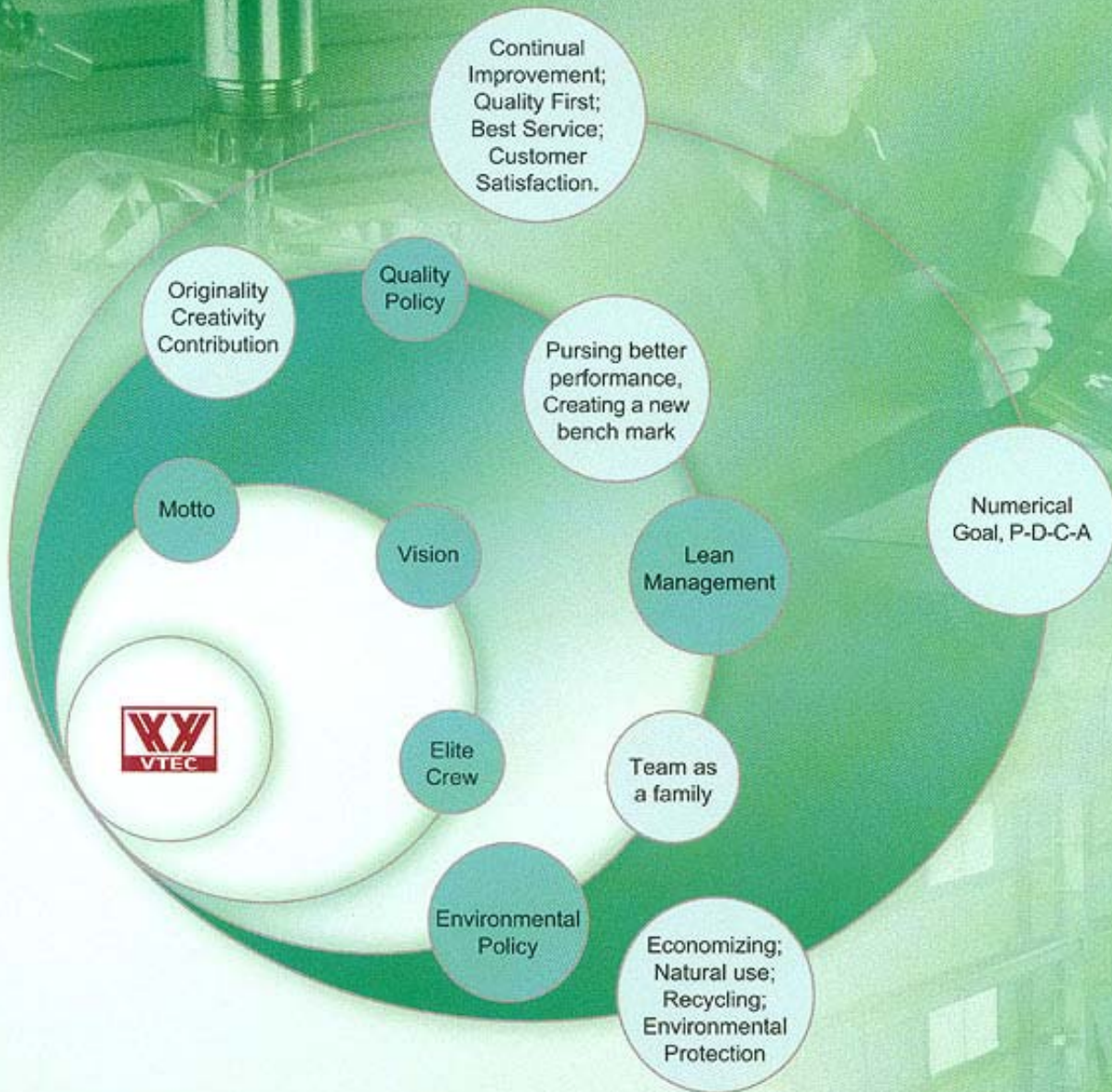


VH series (VH/VH-AC/VH-AH)

CNC Double Column Vertical Machining Centers

- 3.0m/3.5m width
- X, Y axis Roller type Linear way
- 4 guide way for X axis
- VH-AH automatic 5-side machining (Opt.)





Pursuing better performance, Creating a new bench mark !

Vision Wide offers high quality and competitive priced products, our advantages are derived from customer-oriented machine designs, utilizing reliable high quality components and suppliers, integrating our precise process control during production, assembly and testing.

Pursuing better performance, Creating a new bench mark ! We solidify our commitment to the company motto of "Originality", "Creativity", and "Contribution" for best performance and organizational enhancements from a professional team-based environment.

From the little improvements to the future new products, we have the technology for today's industries. We continue to make us more competitive nowadays and afterwards in the CNC machining centers.



High Value . High Precision High Reliability Products

1. **DV series** X:900mm-1400mm
Y:610mm-720mm
Z:610mm

2. **VB series** X:1.5m-4.0m
Y:1.6m-2.0m
Z:800mm

3. **VF series** X:2.0m-6.0m
Y:2.3m/2.6m
Z:920mm / 1020mm

4. **VH series** X:4.2m-10.2m
Y:3.0m/3.5m
Z:1000mm

5. **BM series** X:4.0m-10.2m
Y:3.0m-3.5m
Z:1000mm
W:1000mm

6. **Diversified Heads** 90 degree
Extended
Universal



90° Angle head

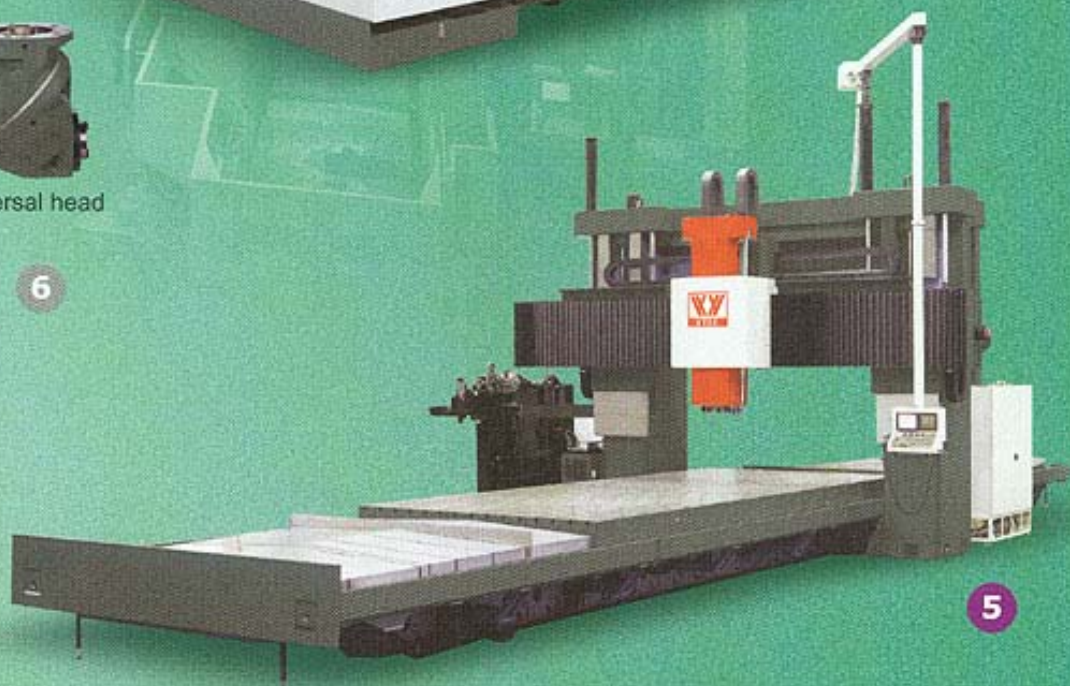


Universal head



Automatic 5-side head

6



5



VH series

4 Guide way bed, X, Y axis Roller type Linear ways Rigid, Accurate, Reliable, High Performance machine !

- Fully supported 4-way bed
- Casting structure: Table, Column, Beam, Saddle, Headstock
- German or Japan made Roller type Linear ways for X, Y axis
- VH & VH-AC Type with Z axis Box way headstock
- VH-AH Type with Z axis Linear way headstock
- Width between columns: 3.0m/3.5m
- Cutting length: 4.2m-10.2m
- Z stroke: 1000 mm
- 4200 rpm(VH-AH), 4500rpm (VH &VH-AC) /6000rpm(Opt.) 2-step gear spindle
- Face milling capacity (mild steel): 40CC/kW/minute
- Extra wide front door opening
- ATC for Vertical spindle or Vertical/Horizontal spindle (Opt. for VH-AH)
- Large ATC capacity: $\varnothing 215\text{mm} \times 450\text{mm L}$
- Over head pendulum type operation panel
- Diversified heads: 90 degree/30 degree/extended/universal
- AH type automatic head changer/ATC for Vertical and Horizontal spindle
- Visionwide FX series operation interface
- Visionwide FTP server software



Photo shows VH-AH type outline

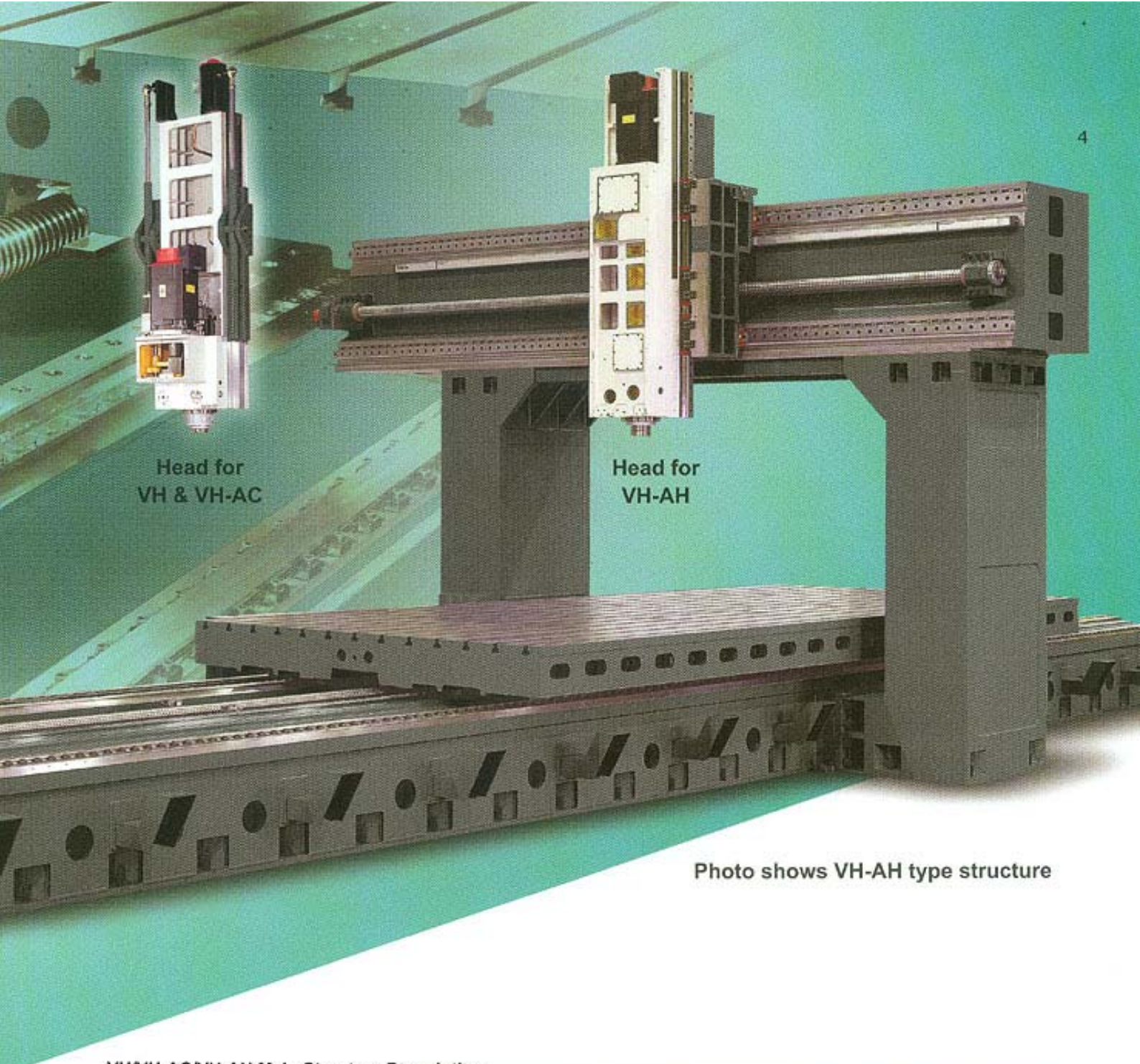


Photo shows VH-AH type structure

VH/VH-AC/VH-AH Main Structure Description

| Type | VH | VH-AC | VH-AH |
|--------------------------|---------------|----------------|------------------------|
| Z axis Guide Way | Box way | Box way | Roller type Linear way |
| Spindle Nose | Long | Short | Short |
| Automatic Tool Changing | Vertical only | Vertical only | Vertical & Horizontal |
| Head attachment | Manual | Semi Automatic | Fully Automatic |
| Head Attachment Magazine | Manual | Manual | Fully Automatic |

- **Best center-line layout of the spindle system**
- **Larger size columns and beam**
- **Self-alignment twin hydraulic cylinders with pressured nitrogen accumulator headstock balancing design**
- **High accuracy and High stability feeding design:**
 - Pre-tensioned C3 grade ball screws
 - Gear reducer for X-axis provides better feeding rigidity
 - XY axis Special design ball screws support and vibration damper(4 m above)



Best center-line layout of spindle system provides powerful, reliable performance !

Design feature of spindle system

- One piece casting with square shape headstock.
- Spindle at the center of the motor, Z ball screw and twin cylinders, reduces the thermal offset of the spindle to minimum.
- Japan made JIS 0 grade gears ensures smooth, efficient running.
- Spindle made by first class supplier, equipped with floating tool release mechanism.
- Temperature cooling system for gears, bearings and spindle.

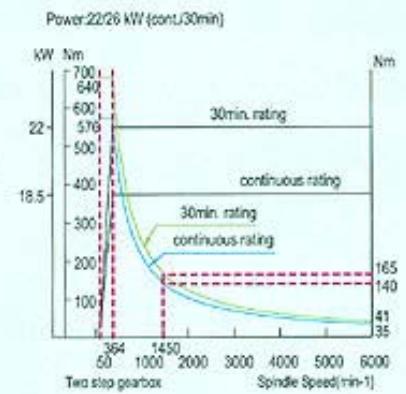
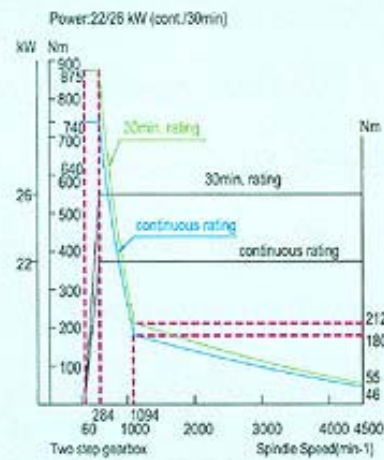
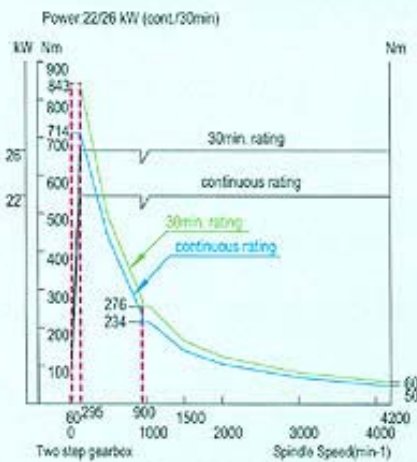


VH-AH

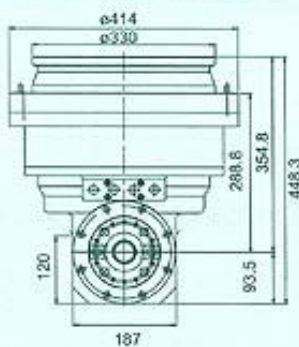


VH & VH-AC

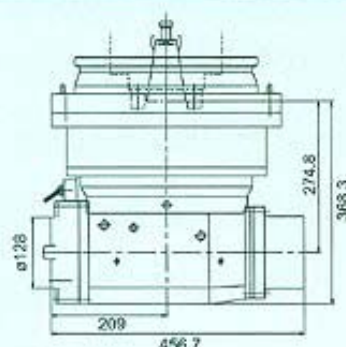
Spindle Power and Torque Chart



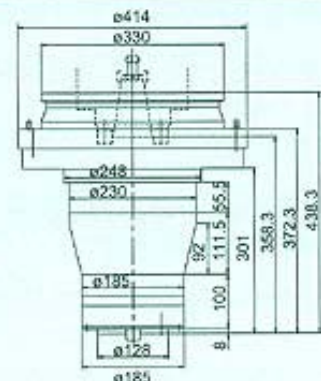
Diversified head attachments (Opt.) provides wider applications (FOR VH-AH)



90 degree angular head (Front view)



90 degree angular head (Side view)

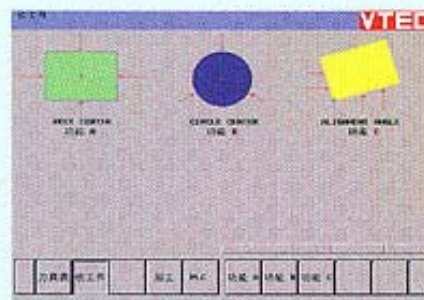


Extended head

Visionwide convenient software for safe and easy operation



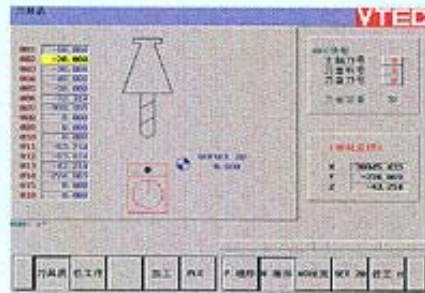
Visionwide FX software



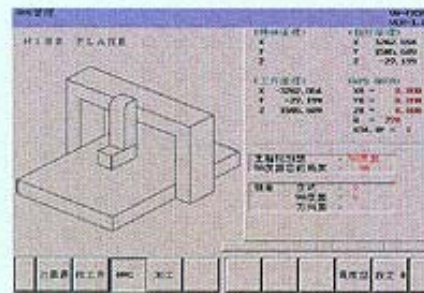
Workpiece coordinate setting



Visionwide FTP Server Software

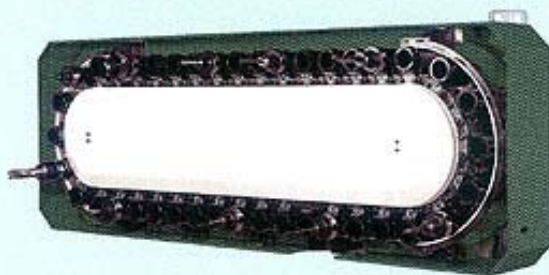


Tool management & Tool length compensation



Horizontal spindle machining function

Automatic tool change & tool magazine for Vertical spindle

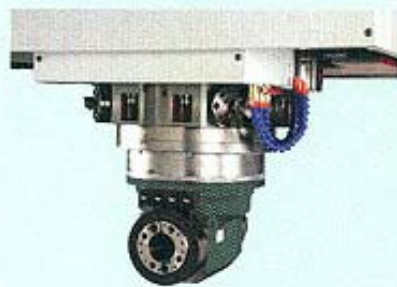


Automatic Tool changing: 40 / 60 tools
(Opt.) Tool size(Max.) $\varnothing 215 \times L450$ mm



Cam type ATC (VH & VH-AC)

VH-AH type fully automatic 5-side machining package (Optional)



Automatic Head changing (Opt.)



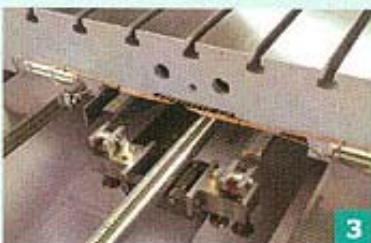
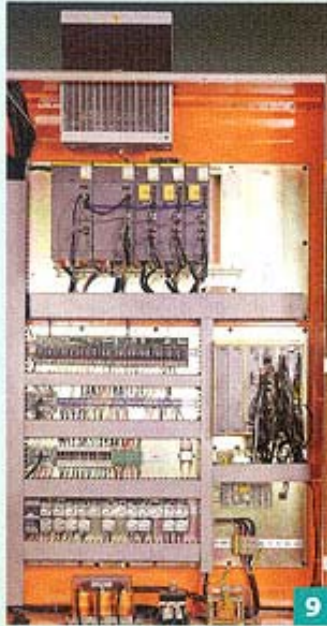
Automatic Head magazine (Opt.)



ATC for Vertical & Horizontal Spindle (Opt.)

With more Standard Accessories

- 01. Pressured air assist balancing
- 02. Cam type ATC (only for VH & VH-AC)
- 03. X axis ball screw supporter(4 m above)
- 04. Ring & nozzle type flood coolant (VH & VH-AC)
- 05. Screw type chip conveyor
- 06. Caterpillar chip conveyor
- 07. Gear reducer for X axis
- 08. Splash water gun & air outlet
- 09. Heat exchanger for electrical cabinet
- 10. High pedulum type operation panel



| SPECIFICATION | UNIT | VH-4230(AC) | VH-5230(AC) | VH-6230(AC) | VH-8230(AC) | VH-10230(AC) |
|---|--------|---|---------------------|---------------------|---------------------|---------------------|
| TRAVEL | | | | | | |
| X axis | mm | 4200 | 5200 | 6200 | 8200 | 10200 |
| Y axis | mm | 3000 | 3000 | 3000 | 3000 | 3000 |
| Z axis | mm | 1000 | 1000 | 1000 | 1000 | 1000 |
| Spindle head structure(Z guide way) | - | Box way for VH & VH-AC, Roller type Linear way for VH-AH | | | | |
| Distance from spindle nose to table | mm | 225-1225(VH-AC), 250-1250(VH & VH-AH) | | | | |
| Distance from spindle center to column | mm | 455 | 455 | 455 | 455 | 455 |
| Distance between columns | mm | 3000 | 3000 | 3000 | 3000 | 3000 |
| TABLE | | | | | | |
| Working surface | mm | 4000x2600 | 5000x2600 | 6000x2600 | 8000x2600 | 10000x2600 |
| T-slot (Size x Number x Pitch) | mm | 28x13x200 | 28x13x200 | 28x13x200 | 28x13x200 | 28x13x200 |
| Max. table load | kg | 20,000 | 24,000 | 28,000 | 32,000 | 36,000 |
| SPINDLE | | | | | | |
| Spindle motor (Continuous/30 minute rated) | kW | 22 / 26 | 22 / 26 | 22 / 26 | 22 / 26 | 22 / 26 |
| Spindle speed (2 steps Gear box) | rpm | 4200/6000(Opt.) for VH-AH, 4500/6000(Opt.) for VH & VH-AC | | | | |
| Spindle taper | - | ISO 50 | ISO 50 | ISO 50 | ISO 50 | ISO 50 |
| FEED | | | | | | |
| Cutting feedrate | mm/min | 1-7000 | 1-7000 | 1-7000 | 1-7000 | 1-7000 |
| Rapid traverse | m/min | X Y: 10, Z:12 | X Y: 10, Z:12 | X: 8, Y: 10, Z:12 | X: 8, Y: 10, Z:12 | X: 8, Y: 10, Z:12 |
| X, Y, Z power capacity | kW | X: 9, Y: 4.5, Z:3.5 | X: 9, Y: 4.5, Z:3.5 | X: 9, Y: 4.5, Z:3.5 | X: 9, Y: 4.5, Z:3.5 | X: 9, Y: 4.5, Z:3.5 |
| ACCURACY | | | | | | |
| Positioning accuracy | mm | ±0.005 / 300, ±0.015 / Full Travel | | | | |
| | | P0.045 | P0.045 | P0.045 | P0.045 | P0.045 |
| Repeatability | mm | ±0.003 | ±0.003 | ±0.003 | ±0.003 | ±0.003 |
| | | Ps0.035 | Ps0.035 | Ps0.035 | Ps0.035 | Ps0.035 |
| ATC | | | | | | |
| Tool storage capacity | pcs | 40/60(Opt.) | 40/60(Opt.) | 40/60(Opt.) | 40/60(Opt.) | 40/60(Opt.) |
| Automatic tool changing ability | - | Vertical | Vertical | Vertical | Vertical | Vertical |
| Max. tool weight | kg | 18 | 18 | 18 | 18 | 18 |
| Tool size (D x L) (Full tools) | mm | Ø125x450L | Ø125x450L | Ø125x450L | Ø125x450L | Ø125x450L |
| Max. tool size (D x L) (next pockets empty) | mm | Ø215x450L | Ø215x450L | Ø215x450L | Ø215x450L | Ø215x450L |
| Tool shank | - | BT50/CAT50 | BT50/CAT50 | BT50/CAT50 | BT50/CAT50 | BT50/CAT50 |
| Pull stud bolt | - | P50T-1 | P50T-1 | P50T-1 | P50T-1 | P50T-1 |
| OTHERS | | | | | | |
| Electric power consumption | kVA | 65 | 65 | 65 | 65 | 65 |
| Machine net weight | kg | 42000 | 48000 | 54000 | 64000 | 74000 |
| Machine gross weight | kg | 48000 | 54000 | 61000 | 72000 | 82000 |
| Max. floor space (L x W x H) | m | 12x7.32x5.6 | 14.0x7.3x5.6 | 17.0x7.3x5.6 | 21.0x7.3x5.6 | 25.0x7.3x5.6 |

Standard Accessory & Function

1. Fanuc 18 iM CNC
2. 4200 rpm(VH-AH), 4500rpm(VH & VH-AC) two-step gear spindle
3. Spindle and gear box cooling system
4. Twin hydraulic cylinders with pressured air assistance balancing system
5. XY axis ball screw supporter (4 m above)
6. Overhead Pendulum type operation panel
7. 40 tools magazine with arm type ATC (VH & VH-AC)
8. Centralized Auto. Lubrication system
9. Independent lubrication oil collector
10. Four pieces splash guard
11. Working Lamp
12. 3-color signal lamp
13. Air blast through spindle
14. Movable manual pulse generator
15. Wash gun and pneumatic interface
16. RS-232 interface
17. Absolute pulse coder
18. Macro executor
19. Flood coolant system
20. Heat exchanger for electrical cabinet
21. Twin chip screws on table side
22. Caterpillar type chip conveyer
23. Foundation pads and bolts kits
24. Tool kits
25. Operation manual, PLC & electrical circuit diagram

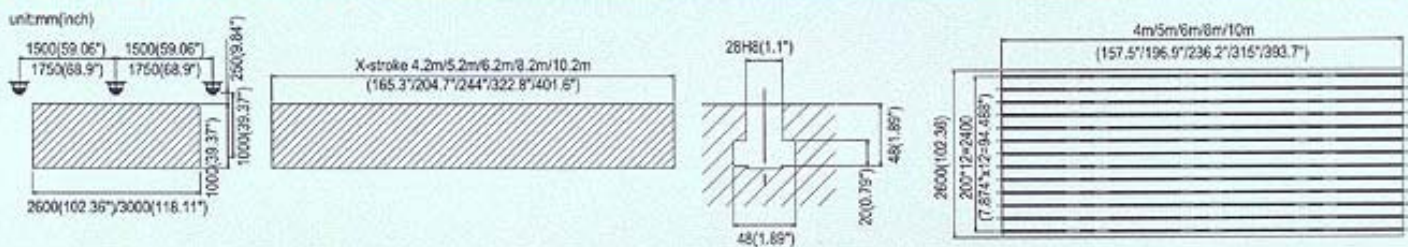
Optional Accessory & Function

1. 8000 rpm two-step gear spindle
2. 60 tools magazine (VH & VH-AC)
3. ATC for Vertical & Horizontal spindle with 60/90 tools magazine (VH-AH)
4. Coolant through tool holder interface
5. Enclosed splash guard (without roof)
6. Devices for CE regulation
7. Heidenhain linear scale feedback
8. 200mm/400 mm higher column
9. Sub working table
10. Oil skimmer
11. Oil-mist cooling device
12. Rotary table
13. Interface preparation for rotary table
14. 3 axis manual pulse generator
15. Automatic tool length measurement (for Vertical spindle)
16. Automatic work piece measurement
17. Semi-Automatic head attachment:
 - 90 degree/extended/universal/30 degree (VH & VH-AC)
18. Fully Automatic changing head attachment:
 - 90 degree/extended/universal/30 degree attachment (VH-AH)
19. Transformer

※ AH type fully automatic 5-side machining package:
Y travel extended 700 mm /Automatic Heads changing/
Automatic head magazine/ATC for Vertical & Horizontal spindle.

| VH-xx37 AH | VH-4235(AC) | VH-5235(AC) | VH-6235(AC) | VH-8235(AC) | VH-10235(AC) | VH-xx42 AH |
|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|----------------------------|
| | 4200 | 5200 | 6200 | 8200 | 10200 | |
| 3700 | 3500 | 3500 | 3500 | 3500 | 3500 | 4200 |
| | 1000 | 1000 | 1000 | 1000 | 1000 | |
| Box way for VH & VH-AC, Roller type Linear way for VH-AH 225-1225(VH-AC), 250-1250(VH & VH-AH) | | | | | | |
| | 455 | 455 | 455 | 455 | 455 | |
| | 3500 | 3500 | 3500 | 3500 | 3500 | |
| W=2600 | 4000x3000 | 5000x3000 | 6000x3000 | 8000x3000 | 10000x3000 | W=3000 |
| | 28x15x200 | 28x15x200 | 28x15x200 | 28x15x200 | 28x15x200 | |
| | 20,000 | 24,000 | 28,000 | 32,000 | 36,000 | |
| | 22 / 26 | 22 / 26 | 22 / 26 | 22 / 26 | 22 / 26 | |
| 4200/6000(Opt.) for VH-AH, 4500/6000(Opt.) for VH & VH-AC | | | | | | |
| | ISO 50 | ISO 50 | ISO 50 | ISO 50 | ISO 50 | |
| | 1-7000 | 1-7000 | 1-7000 | 1-7000 | 1-7000 | |
| | X Y:10, Z:12 | X Y:10, Z:12 | X: 8, Y: 10, Z: 12 | X: 8, Y: 10, Z: 12 | X: 8, Y: 10, Z: 12 | |
| | X: 9, Y: 4.5, Z:3.5 | X: 9, Y: 4.5, Z:3.5 | X: 9, Y: 4.5, Z: 3.5 | X: 9, Y: 4.5, Z: 3.5 | X: 9, Y: 4.5, Z: 3.5 | |
| $\pm 0.005 / 300, \pm 0.015 / \text{Full Travel}$ | | | | | | |
| | P0.045 | P0.045 | P0.045 | P0.045 | P0.045 | |
| | ± 0.003 | ± 0.003 | ± 0.003 | ± 0.003 | ± 0.003 | |
| | Ps0.035 | Ps0.035 | Ps0.035 | Ps0.035 | Ps0.035 | |
| 60/90(Opt.) +Horizontal | 40/60(Opt.) Vertical | 40/60(Opt.) Vertical | 40/60(Opt.) Vertical | 40/60(Opt.) Vertical | 40/60(Opt.) Vertical | 60/90(Opt.) +Horizontal |
| | 18 | 18 | 18 | 18 | 18 | |
| | Ø125x450L | Ø125x450L | Ø125x450L | Ø125x450L | Ø125x450L | |
| | Ø215x450L | Ø215x450L | Ø215x450L | Ø215x450L | Ø215x450L | |
| | BT50/CAT50 | BT50/CAT50 | BT50/CAT50 | BT50/CAT50 | BT50/CAT50 | |
| | P50T-1 | P50T-1 | P50T-1 | P50T-1 | P50T-1 | |
| | 65 | 65 | 65 | 65 | 65 | |
| W+2000 | 44000 | 50000 | 56000 | 66000 | 76000 | W+2000 |
| W+2000 | 50000 | 56000 | 63000 | 74000 | 84000 | W+2000 |
| W=8.9 | 12.0x7.8x5.6 | 14.0x7.8x5.6 | 17.0x7.8x5.6 | 21.0x7.8x5.6 | 25.0x7.8x5.6 | W=9.4 |

Table and T-slot dimension



Major machine dimensions (not available for VH-AH)

