# NVD 6700

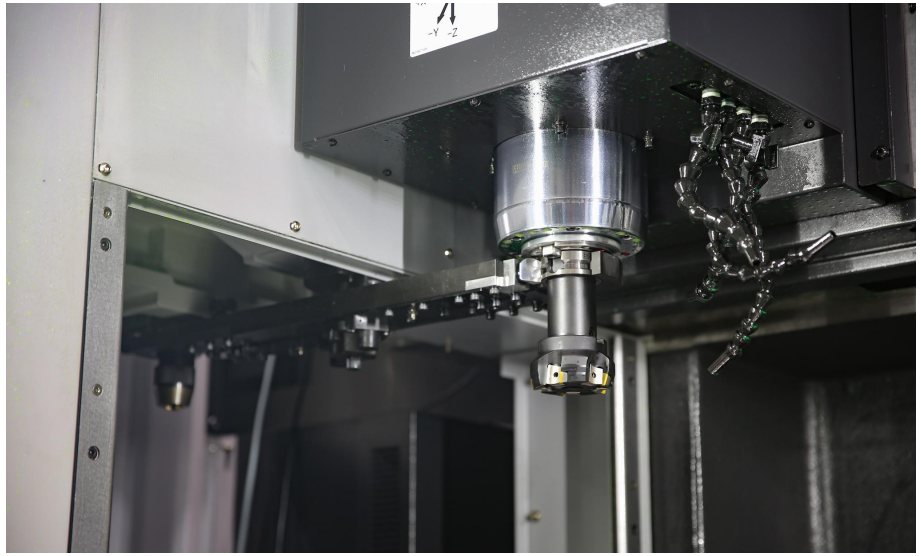
## Ultra-precision Bridge Type MCT

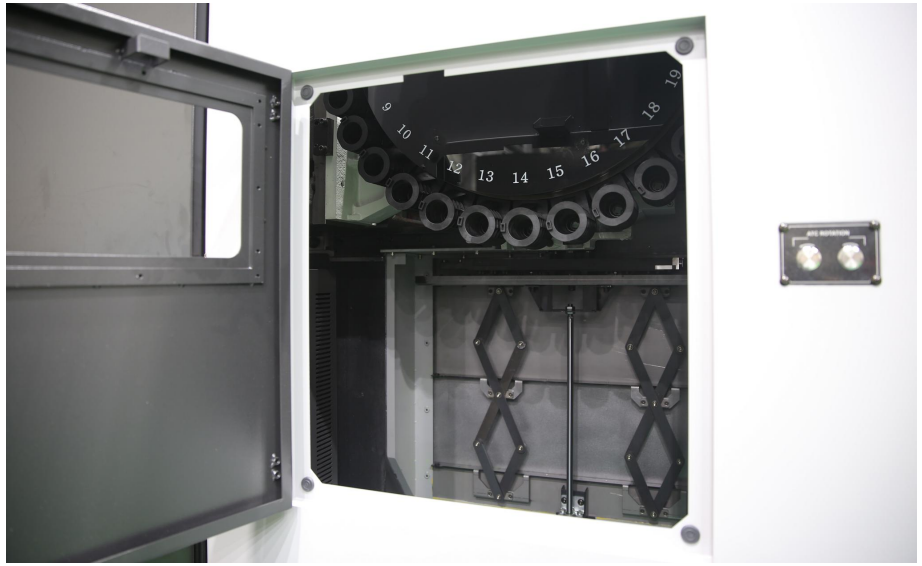

2025-04-04

# Machine Specifications

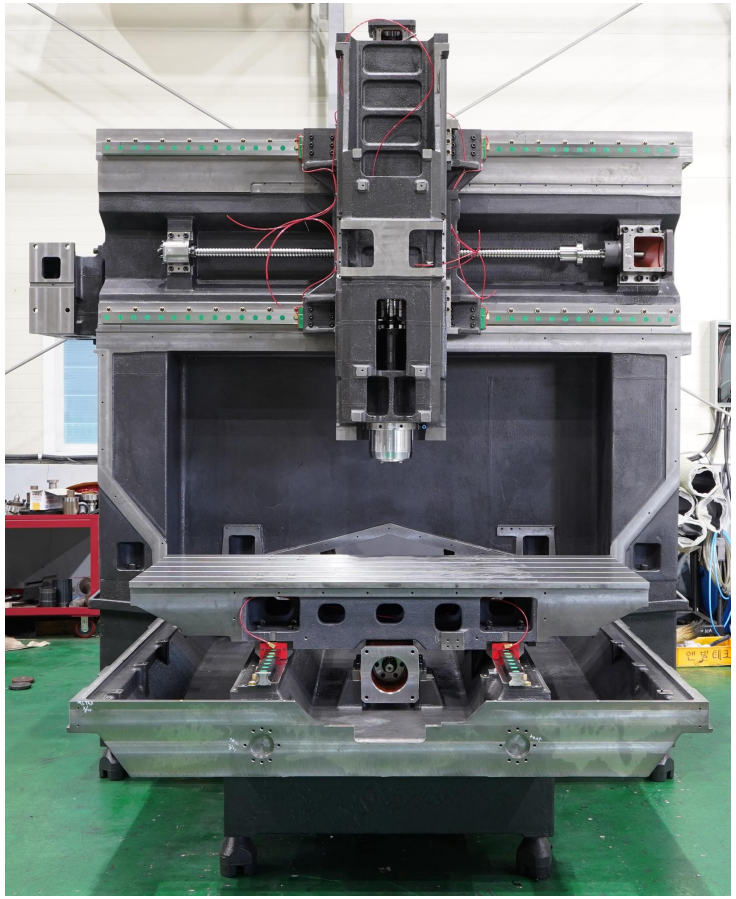
| DESCRIPTION | | | UNIT | NVD 6700 |
|---|---|---|---|---|
| FEED | Travel distance | X axis | mm | 1,450 |
| | | Y axis | mm | 670 |
| | | Z axis | mm | 650 |
| | Rapid traverse rate | X axis | m/min | 36 |
| | | Y axis | m/min | 36 |
| | | Z axis | m/min | 24 |
| | Feed motor output | X/Y/Z | KW | 7/7/7 |
| | Distance from spindle nose to table top | | mm | 100 ~ 750 [High column: 300~950] |
| | Slide type | | - | LM Roller Guide |
| TABLE | Table size | | mm | 1,600 x 670 |
| | Table loading capacity | | kg | 1,500 |
| | Height from floor to table | | mm | 930 |
| | Distance to table | | mm | 175 |
| SPINDLE | Taper | | - | ISO #40 |
| | Max. spindle speed | | rpm | 12,000 |
| | Spindle output | | kW | 15/18.5/25/30 |
| | Max. spindle torque | | N.m | 191 |
| ATC | Type of tool shank | | - | BBT 40 [CAT Big plus 40] |
| | Tool storage capacity | | Ea | 30 |
| | Max. tool diameter | Continuous | mm | Ø80 |
| | | Without adjacent tools | mm | Ø125 |
| | Max. tool length | | mm | 250 |
| | Max. tool weight | | kg | 8 |
| | Tool changing time | Tool-to-Tool | Sec | 2.5 |
| | | Chip-to-Chip | Sec | 4.3 |
| CONTROLLER | | | - | Fanuc 0i-MF Plus (15” touch panel) |

# NVD6700

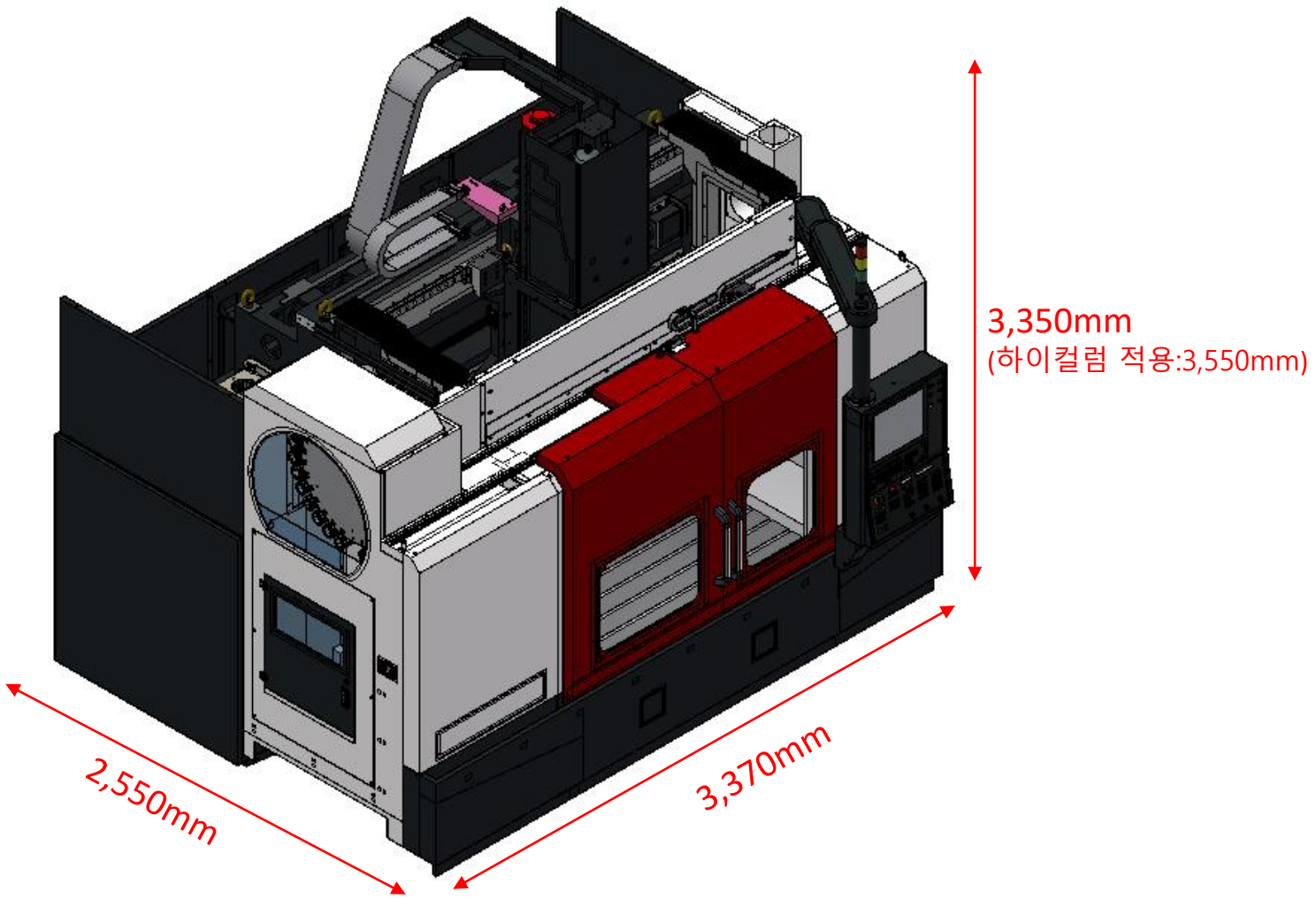


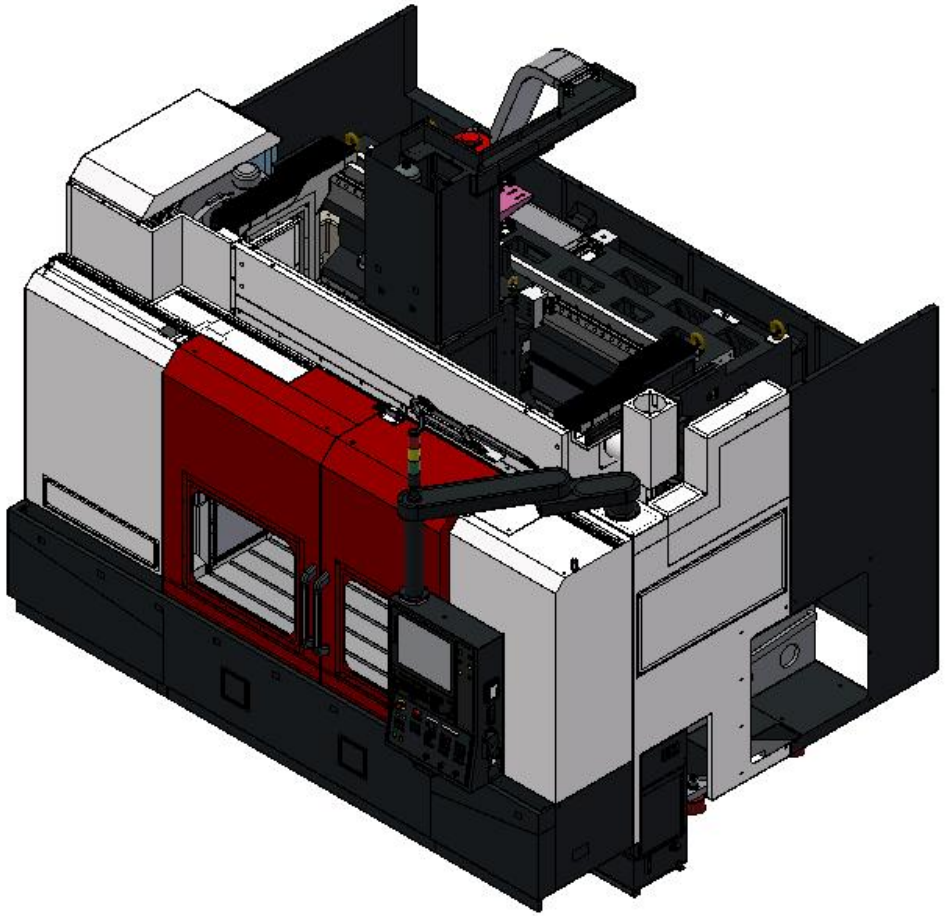


# Structure



# Machine LAY OUT



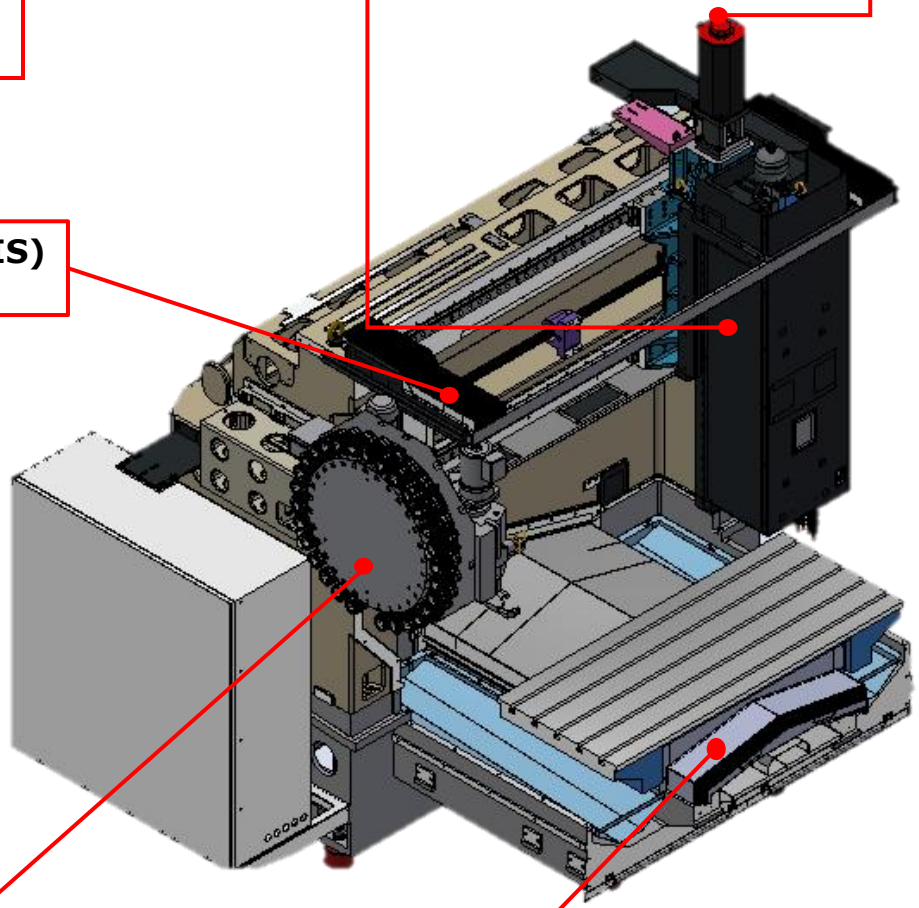



# Machine Components

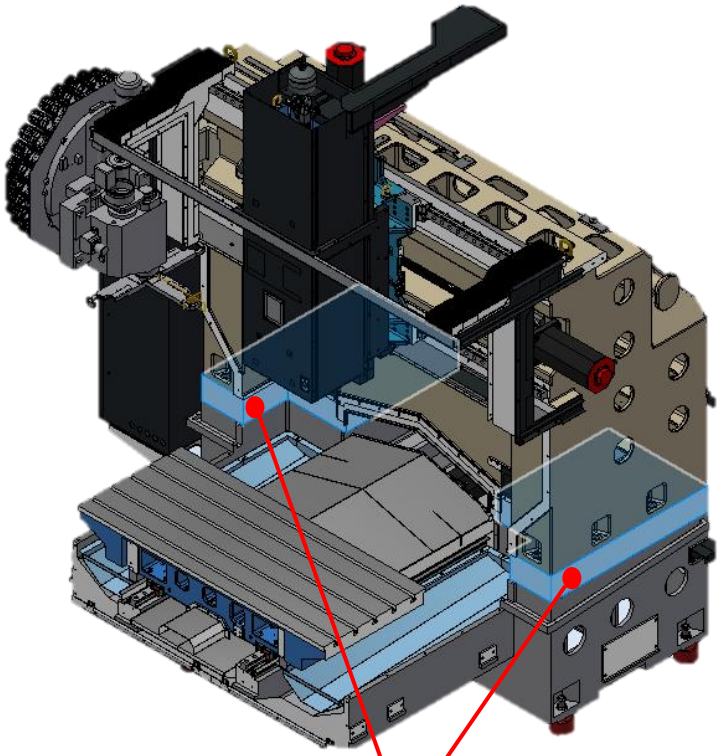
**Grinding Spindle**
- Direct spindle
- 12,000 rpm
- 15/18.5/25/30

**AXIS MOTOR(X/Y/Z)**
- 7/7/7 Kw

**Slide COVER(X-AXIS)**
- BELLOWS COVER



HYD UNIT

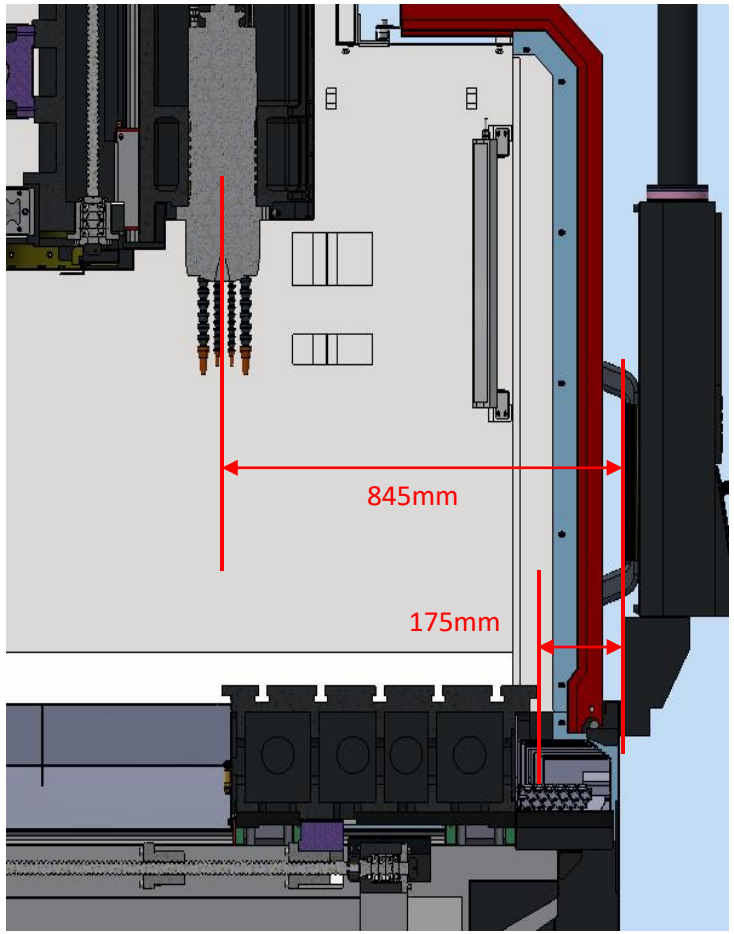


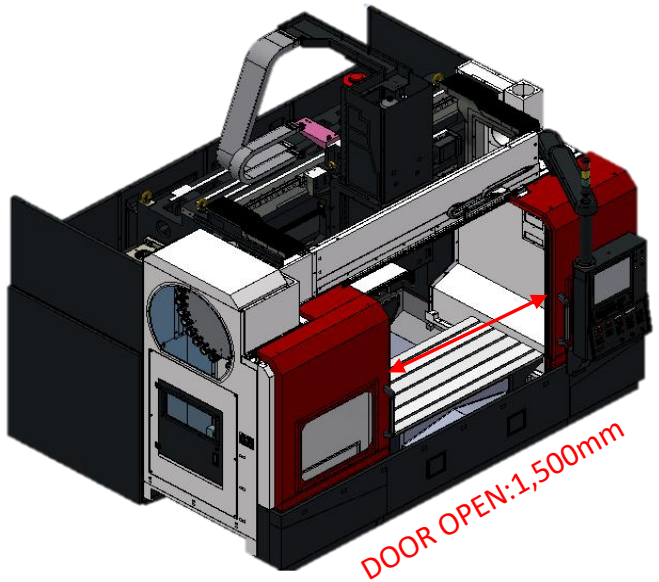
HIGH COLUM OPTION
200mm COLUMN BASE

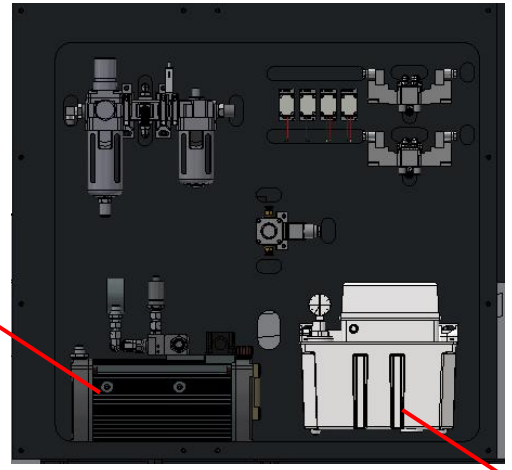
**ATC MAGAZINE**
- 30 TOOL
- CAM TYPE
- MAX.ø125-250L

**Slide COVER(Y-AXIS)**
- STEEL COVER

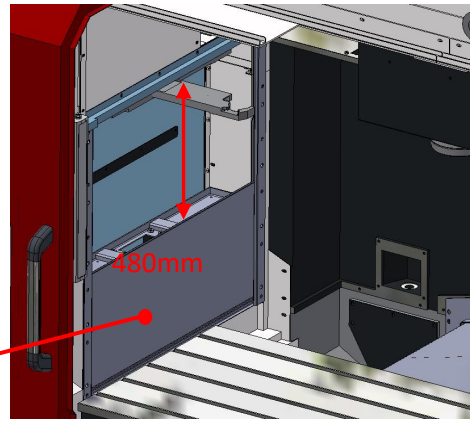
# Machine LAY OUT



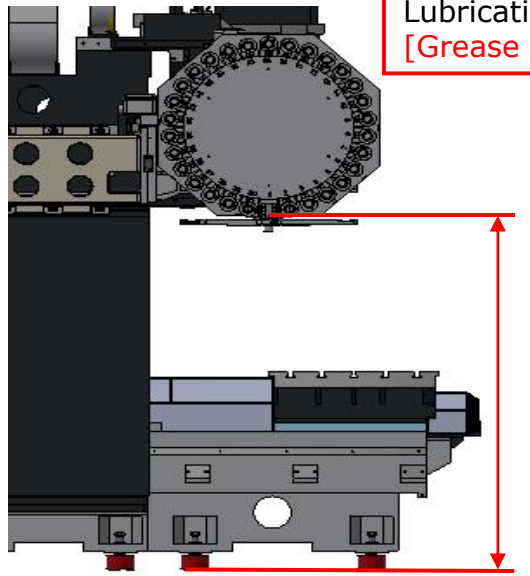




Lubrication (Oil)
[Grease option]

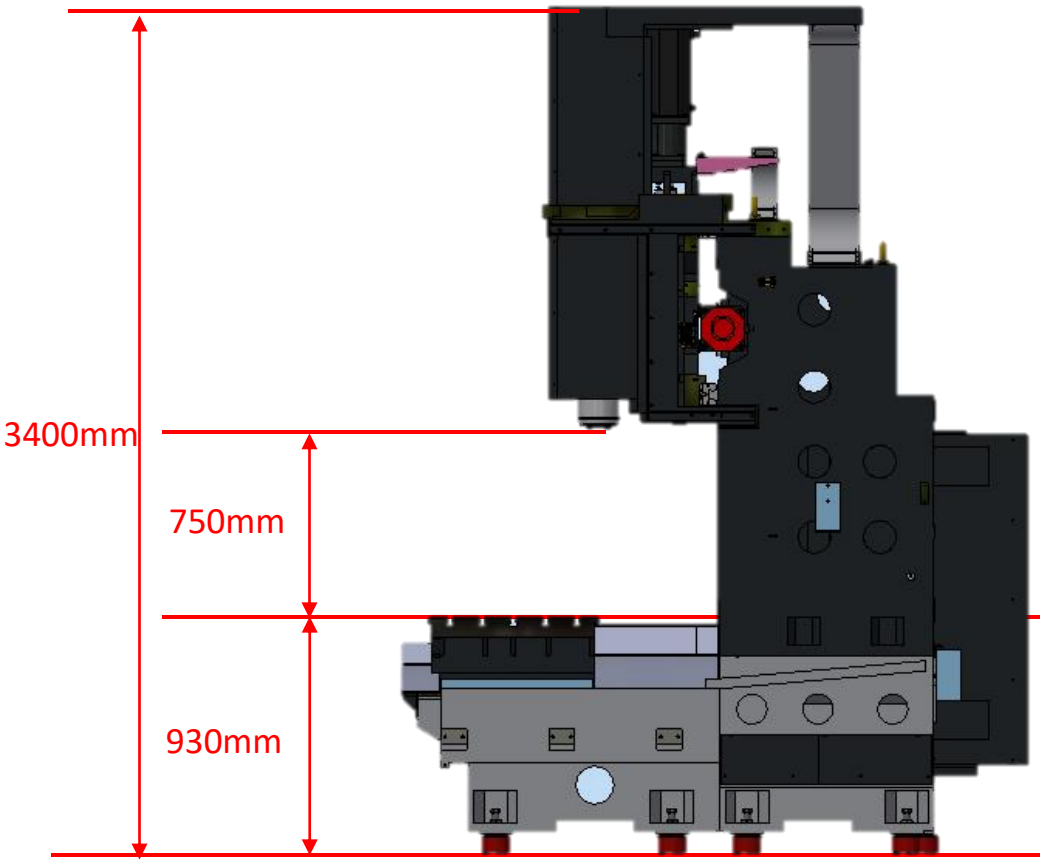



ATC AUTO DOOR

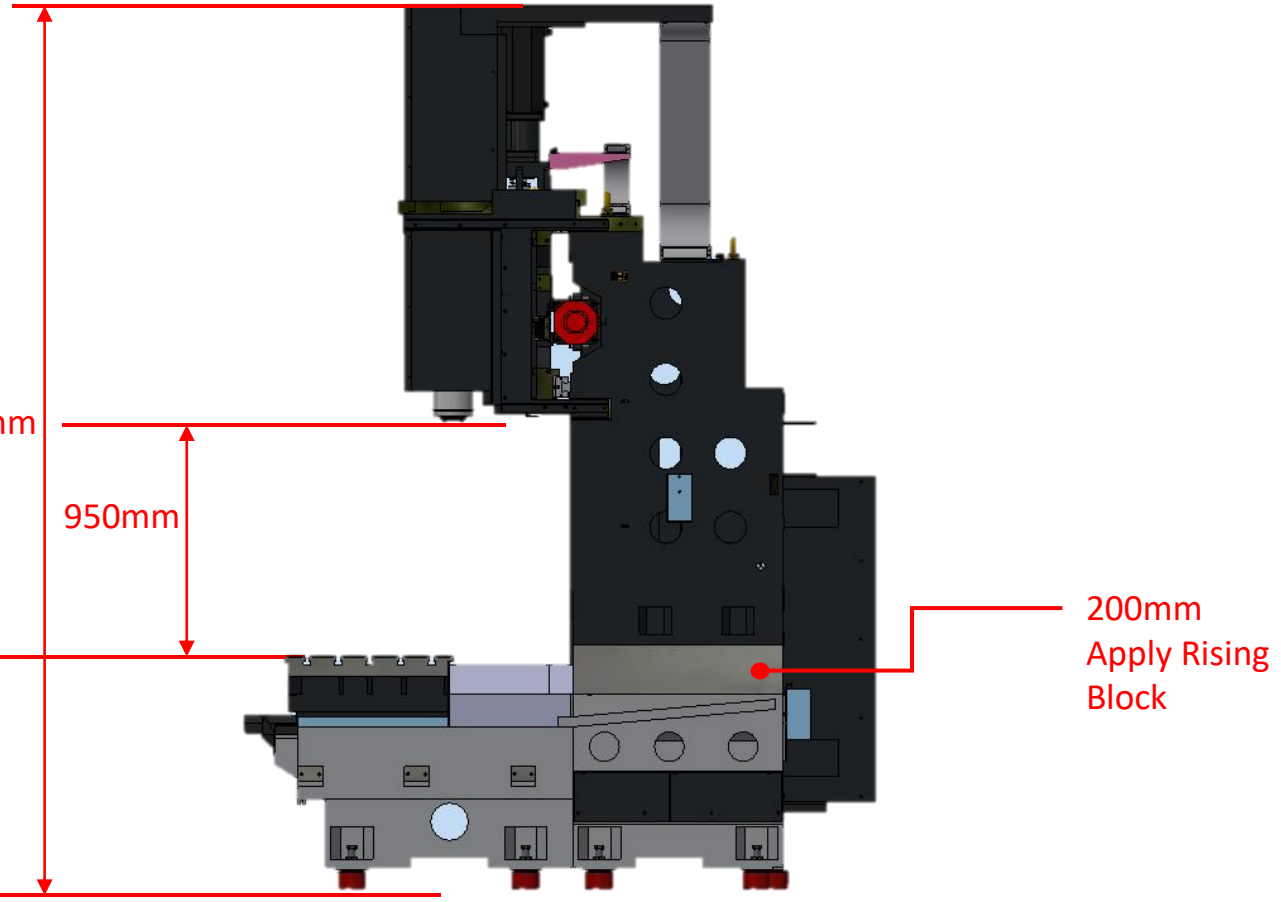


# Machine LAY OUT

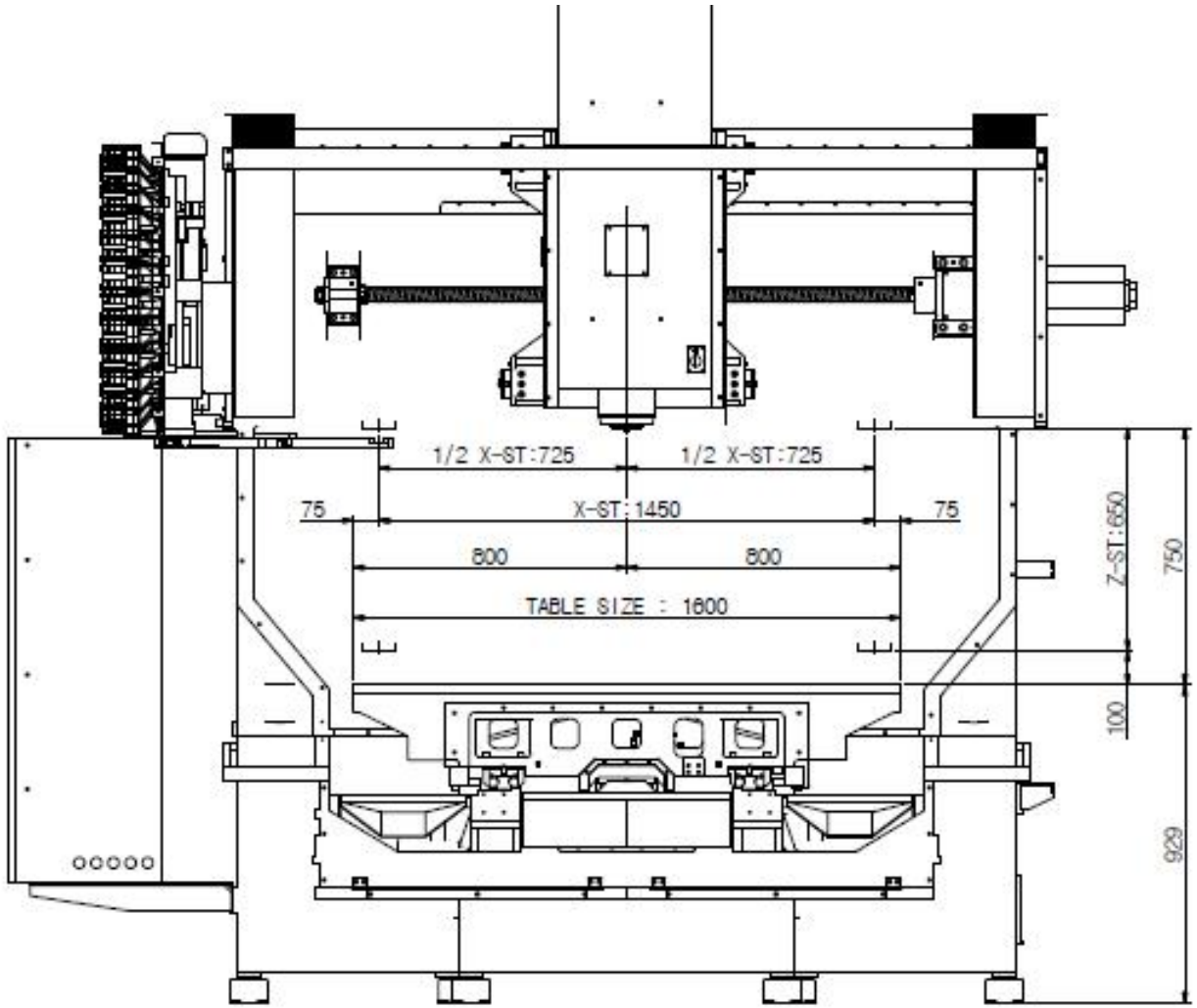
STD

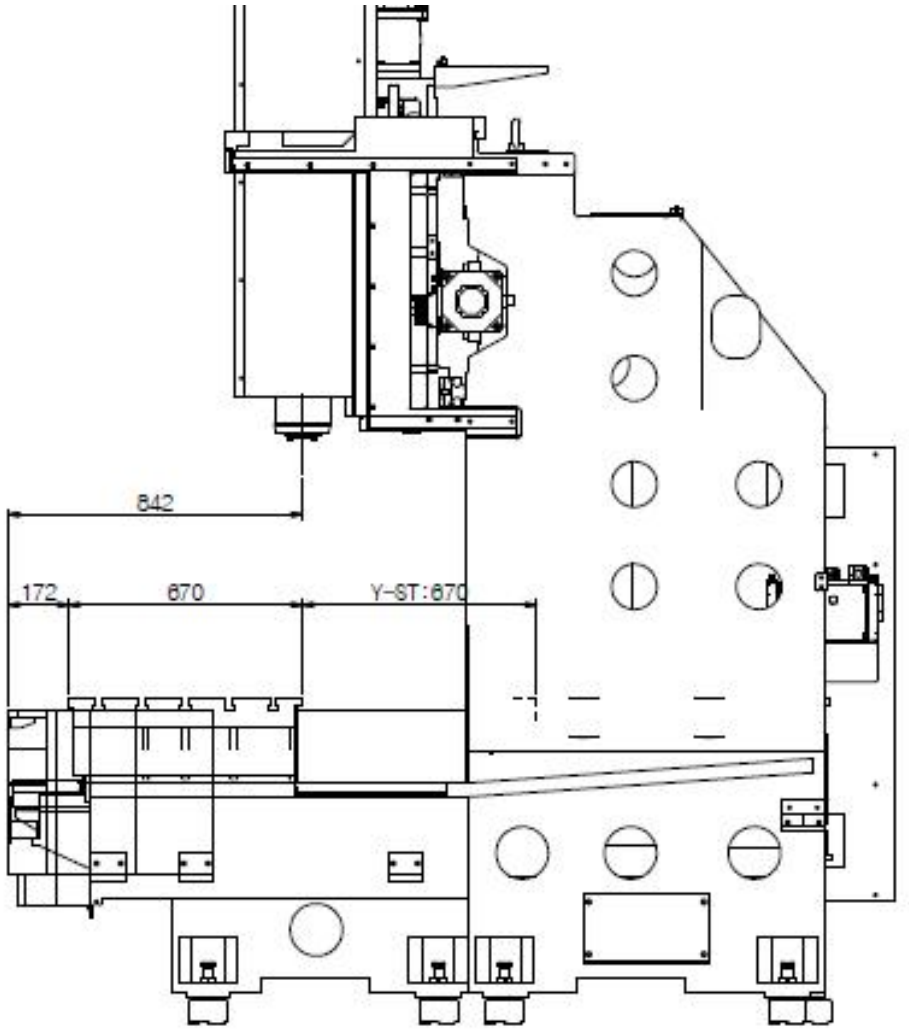



200MM HIGH COLUMN

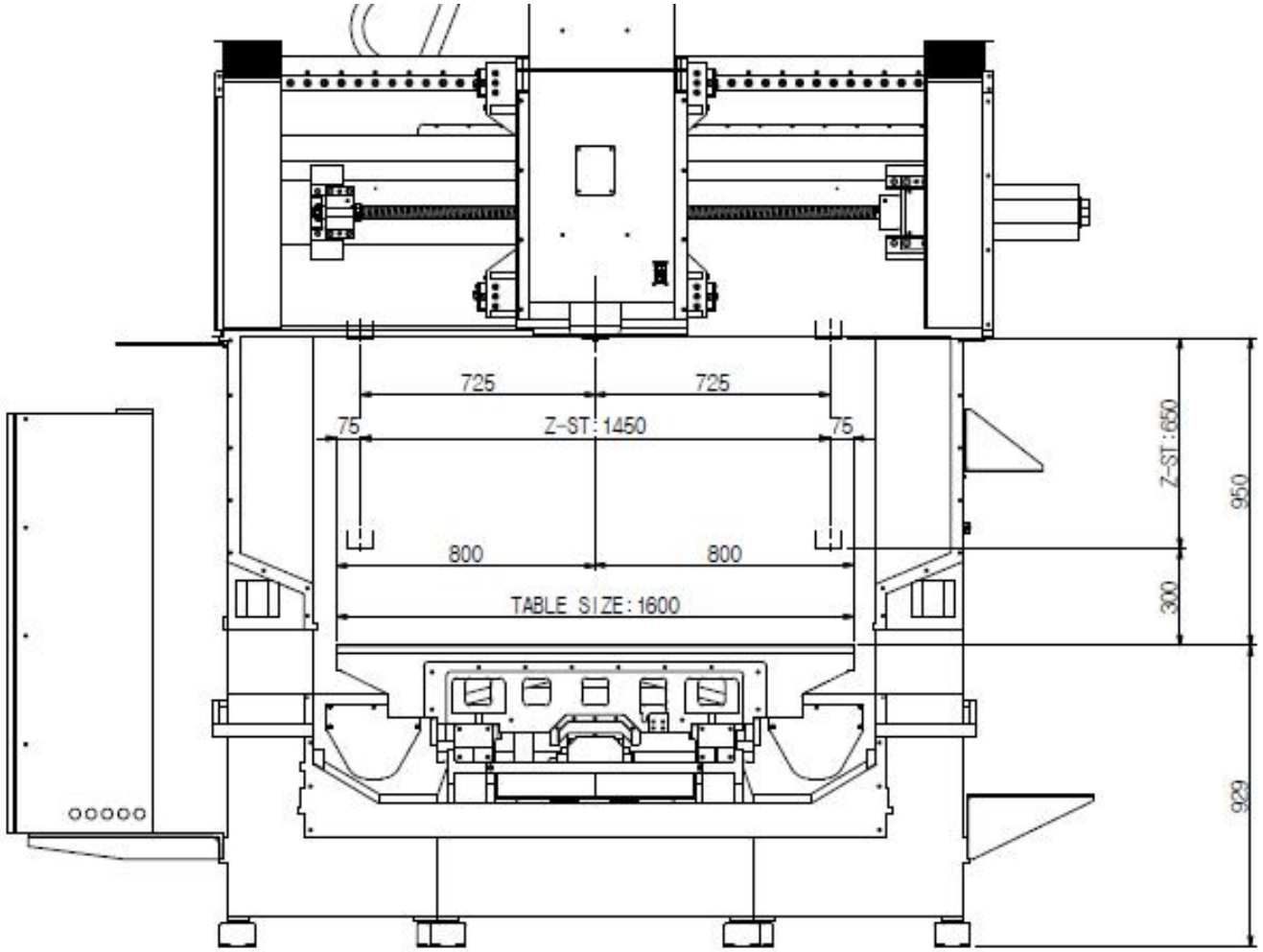


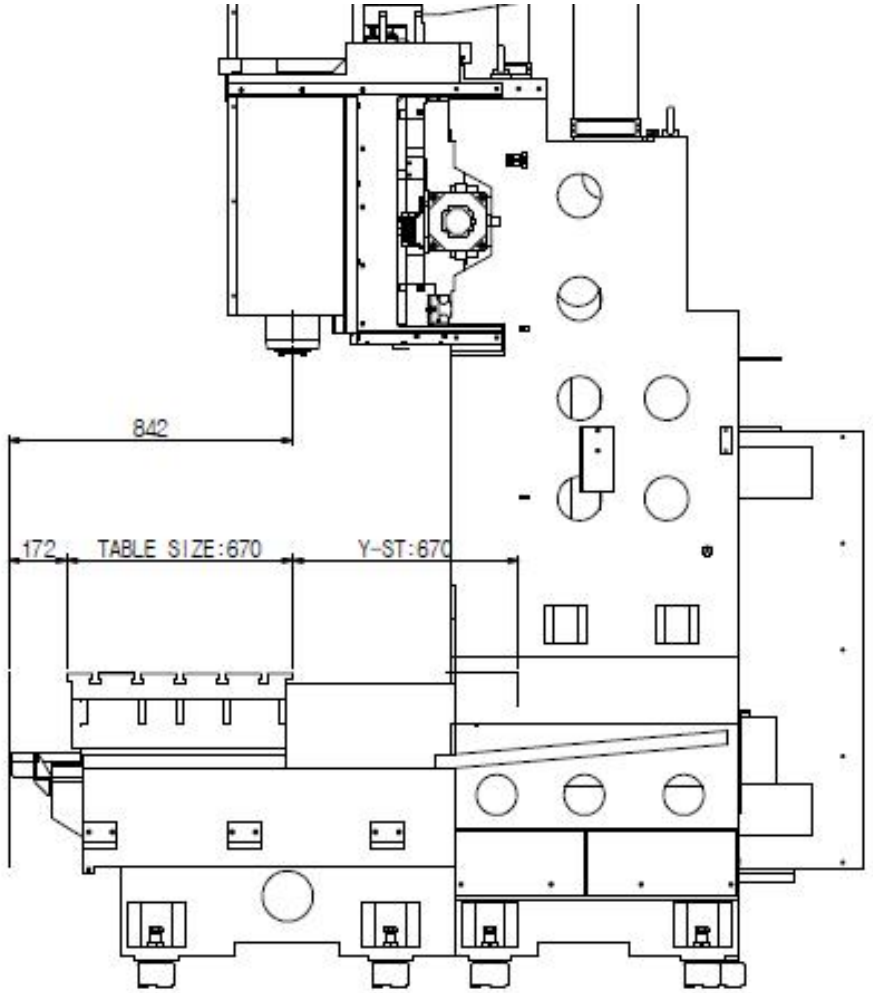
# Machine Layout



# Machine Layout(200mm HIGH COLUMN)



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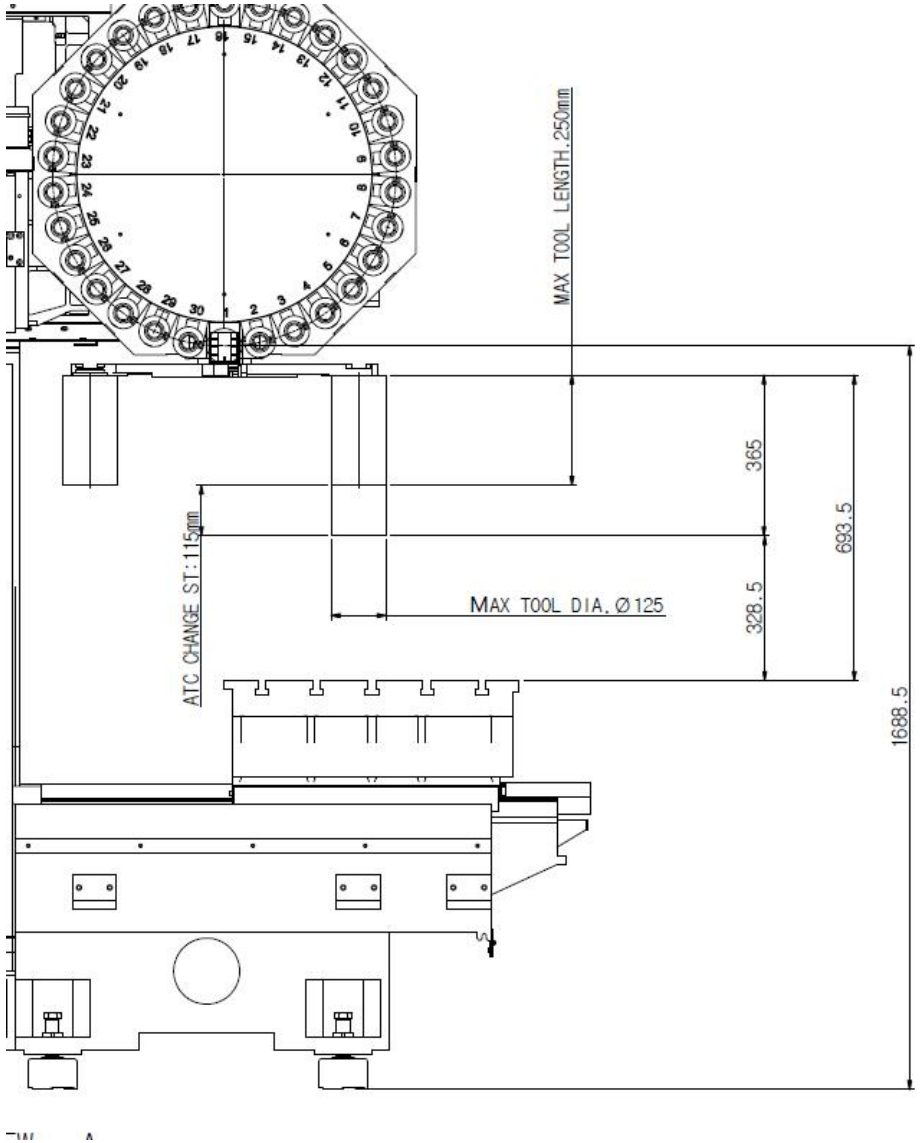
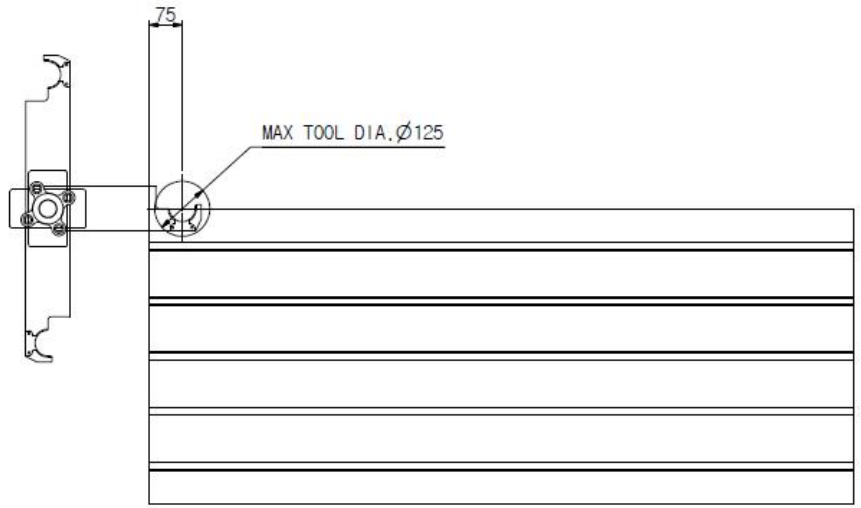
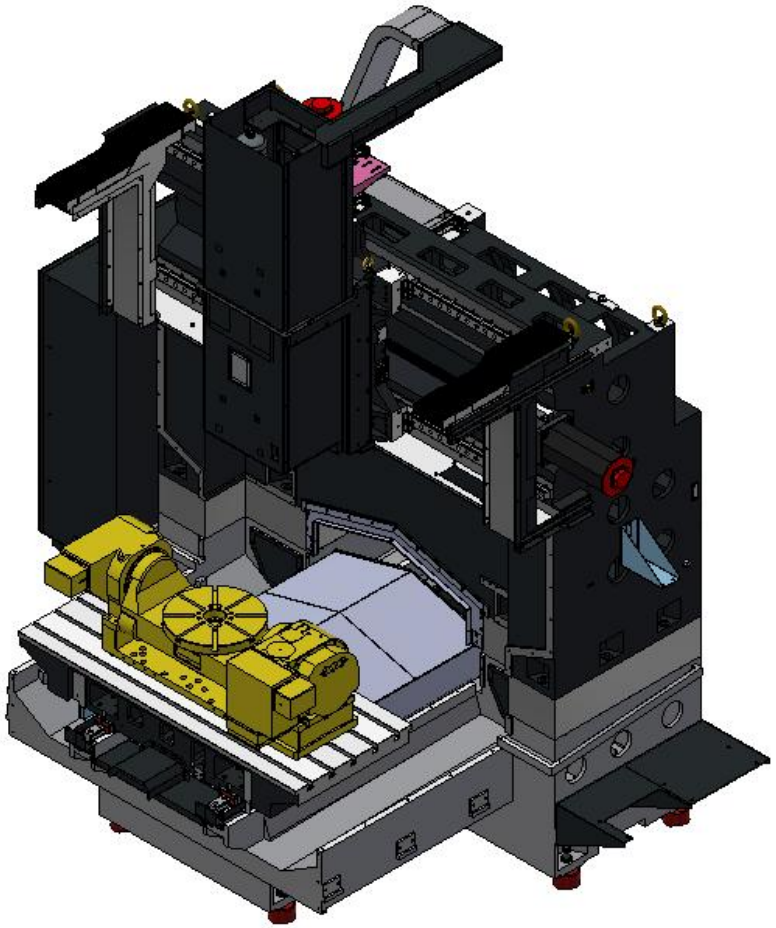
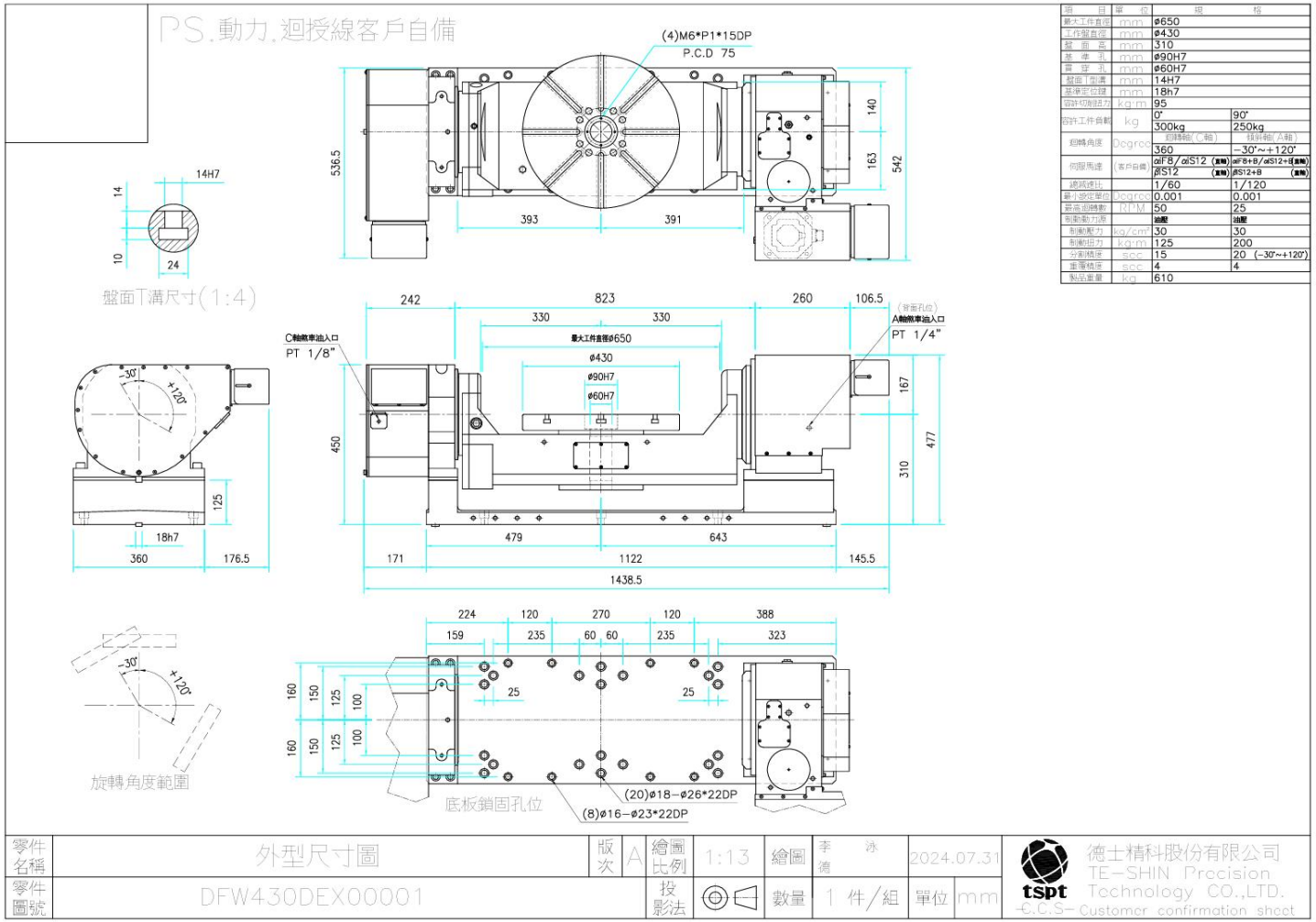


# Machine Layout(Tilting & rotary table 설치 1/2 )

TILTING & ROTARY TABLE DIA 430MM MAKER DEX(대만)



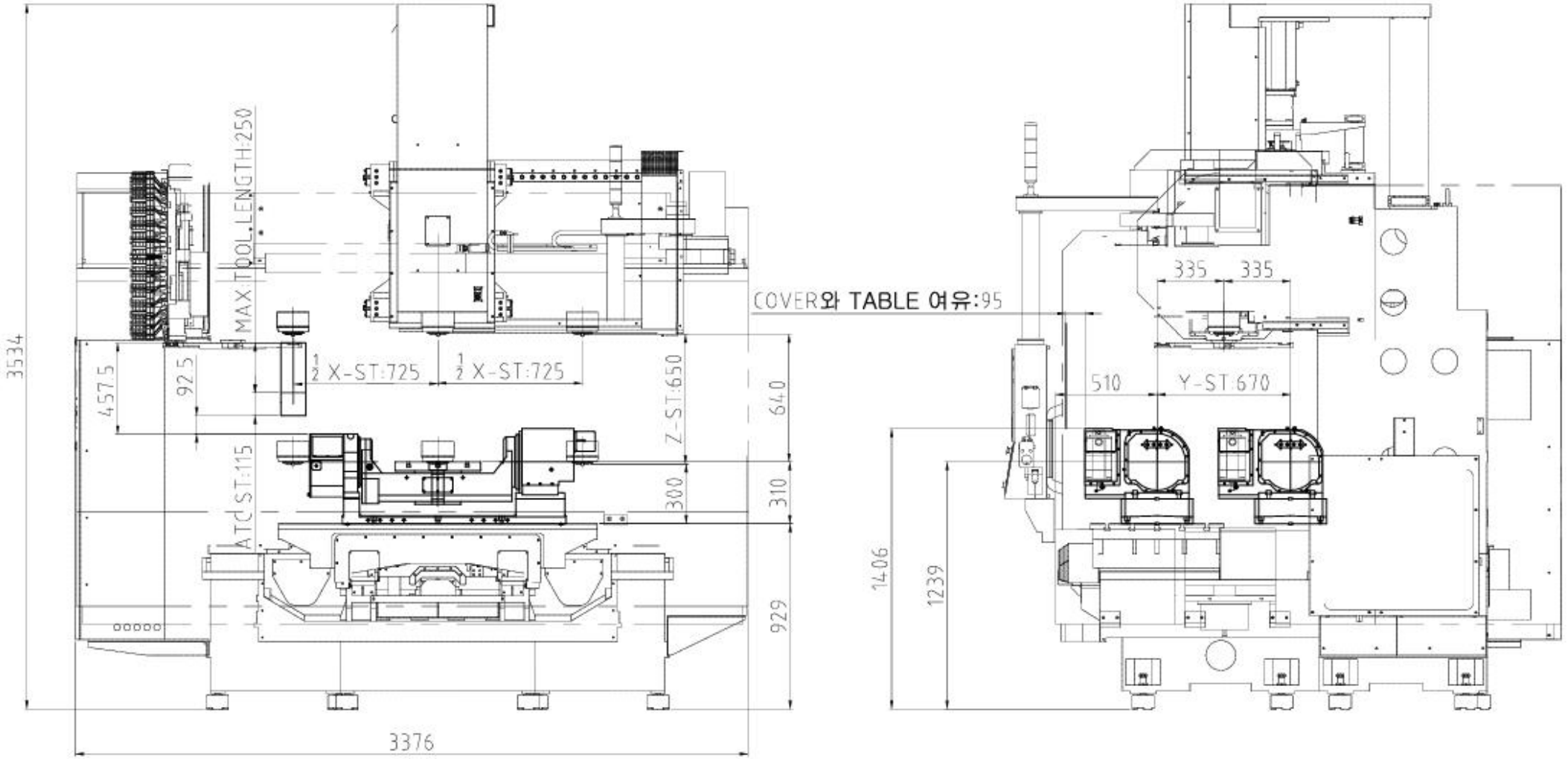



| 項目 | 單位 | 規格 | |
|---|---|---|---|
| 最大工件直徑 | mm | ø650 | |
| 工作盤直徑 | mm | ø430 | |
| 盤面高 | mm | 310 | |
| 基準孔 | mm | ø90H7 | |
| 置穿孔 | mm | ø60H7 | |
| 盤面T溝 | mm | 14H7 | |
| 基準定位鍵 | mm | 18h7 | |
| 容許切削扭力 | kg-m | 95 | |
| 容許工件負載 | kg | 0° | 90° |
| | | 300kg | 250kg |
| 迴轉角度 | Degree | 迴轉軸(C軸) | 傾斜軸(A軸) |
| | | 360 | -30°~+120° |
| 伺服馬達（客戶自備） | | αiF8/αiS12（直驅） | αiF8+B/αiS12+B（直驅） |
| | | βiS12（直驅） | βiS12+B（直驅） |
| 總減速比 | | 1/60 | 1/120 |
| 最小設定單位 | Degree | 0.001 | 0.001 |
| 最高迴轉數 | RPM | 50 | 25 |
| 制動動力源 | | 油壓 | 油壓 |
| 制動壓力 | kg/cm² | 30 | 30 |
| 制動扭力 | kg-m | 125 | 200 |
| 分割精度 | sec | 15 | 20（-30°~+120°） |
| 重覆精度 | sec | 4 | 4 |
| 製品重量 | kg | 610 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 零件名稱 | 外型尺寸圖 | 版次 | A | 繪圖比例 | 1:13 | 繪圖 | 李 冰 德 | 2024.07.31 |
| 零件圖號 | DFW430DEX00001 | | | 投影法 | | 數量 | 1 件/組 | 單位 mm |

德士精科股份有限公司
TE-SHIN Precision Technology CO.,LTD.
-C.C.S- Customer confirmation sheet

# Machine Layout (Tilting & rotary table 설치 2/2 )



# Ballbar Test (Circularity)

- SMART NVD6700 achieve excellence circularity result of **3.2 micron**

1 퍼센트 | 2 값 | 3 표 | 4 테스트 조건

**Ballbar diagnostics (%)**

**XY 360각도 100mm 20250108-center1**

Operator: 20220212

Date: 2025-Jan-08 16:14:25

RENISHAW

Machine: Quick check

QC20-W: 3RGK51, Last calibrated: 2021-09-28

18% Reversal spikes Y

-1.0µm

-1.0µm

15% Straightness X

-1.8µm

14% Lateral play X

-0.1µm

-1.2µm

10% Backlash X

0.3µm

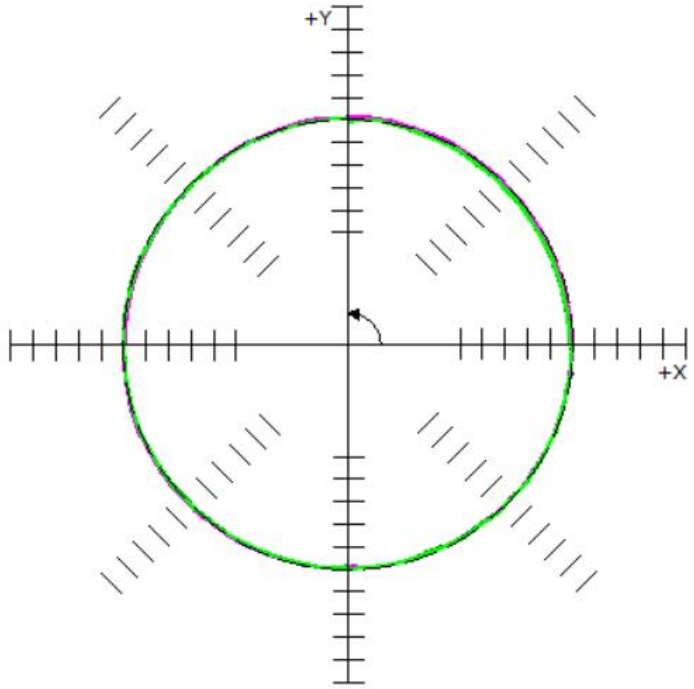
0.6µm

10% Cyclic error Y

↑0.5µm

↓0.6µm

Circularity 3.2µm




Run 1

Run 2

Fit 1

Fit 2

10.0µm/div