



Corporate Office

**S&T MACHINERY (P) LTD.**

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\*\*Due to continuous improvements, we reserve the right to amend any aspect of the  
above specifications without further notice.

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www.stmcnc.com

**DL Series**

The Ideal  
Machines  
for **Large**  
Component  
Machining



Manufacturing Unit  
of S&T Group



Discover the Meaning of Value

Mar - 2024





Established in **1996**, **S&T Group** is a **PAN India** Organisation having its corporate office at Coimbatore. S&T has been offering global technology products and services to its valuable customers in India and South East Asian countries through manufacturing, sourcing and e-commerce businesses.

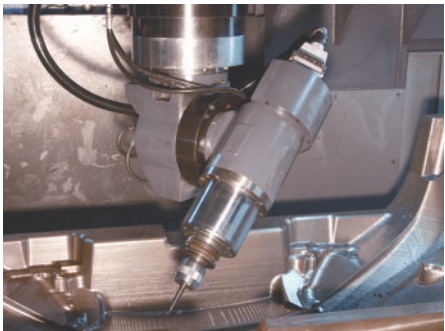
S&T has been offering machining solutions for more than 25+ years. Since inception, the company has been offering cost-effective solutions to the manufacturing sector by

sourcing tool room machinery, metal cutting and EDM solutions, plastic processing machines, machine tool accessories, and consumables from reputed manufacturers globally.

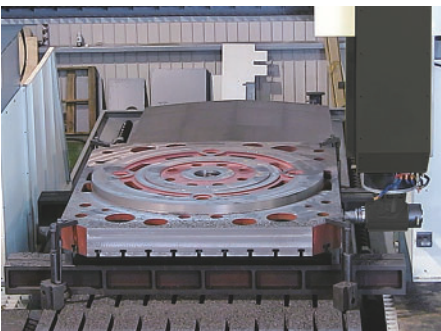
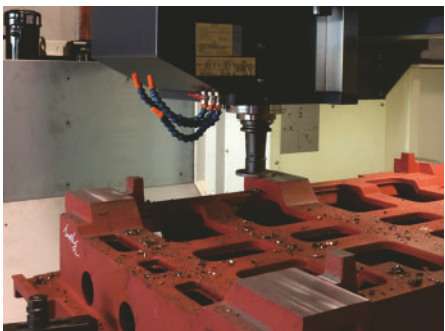
As S&T Group leveraged itself to be very strong in industrial trading business and had built a formidable customer base globally, it started manufacturing its own machineries to accomplish its vision of 'Making Technology Affordable' to Indian customers.

## Applications

### Automotive Industry



### Industrial Machining



### Aerospace Industry



### Mold Industry



### Electronics Industry







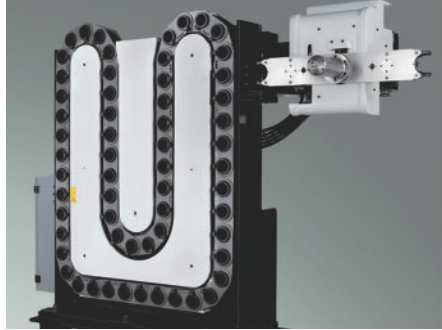
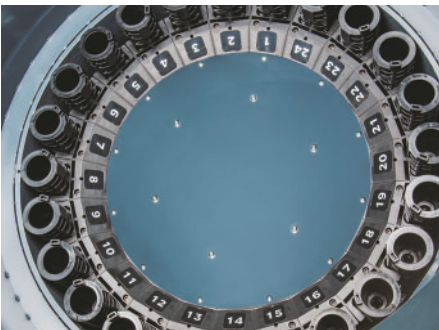
Accessories

STANDARD

Coolant system	Program light	Screw type chip conveyor
Half guarding	Tool & box	USB/RJ45/CF/RS-232 Interface
Levelling bolts & blocks	Spindle oil cooler	LED work light
Centralized automatic oil lubrication system	Remote handwheel	
Air blast through spindle	Panel ac	

OPTIONAL

90° milling head	Thermal compensation	Full guarding
Manual (Auto) position of heads	4 <sup>th</sup> axis rotary table	Steel belt type chip conveyor
Linear scales(X/Y/Z)	Automatic tool measurement system	
Foot pedal	Oil mist device	



Impressive  
Performance

Robust  
Construction

Enhanced  
Productivity

Great  
Reliability



Impressive Precision, Robust Construction,  
Enhanced Productivity And Great Reliability



Launched in June 2015, S&T Machinery, encouraged by the “Make in India” initiative, has become a renowned manufacturer of high-quality CNC Vertical Machining Center, Cylindrical Grinding Machines, Drill Tap Centers, and Double Column Machining Centers.

STM has analyzed, researched and developed ingenious solutions to make technology affordable. STM is one among the 5 machine tools brands in India.

STM focuses on supplying machines that are robust, high-performing and reliable offering increased productivity. STM has envisioned various industry needs of our nation and delivered world class solutions for Indian requirements.

STM, also contributes to overall customer satisfaction as it always backs them up with quality post-sales and service support.

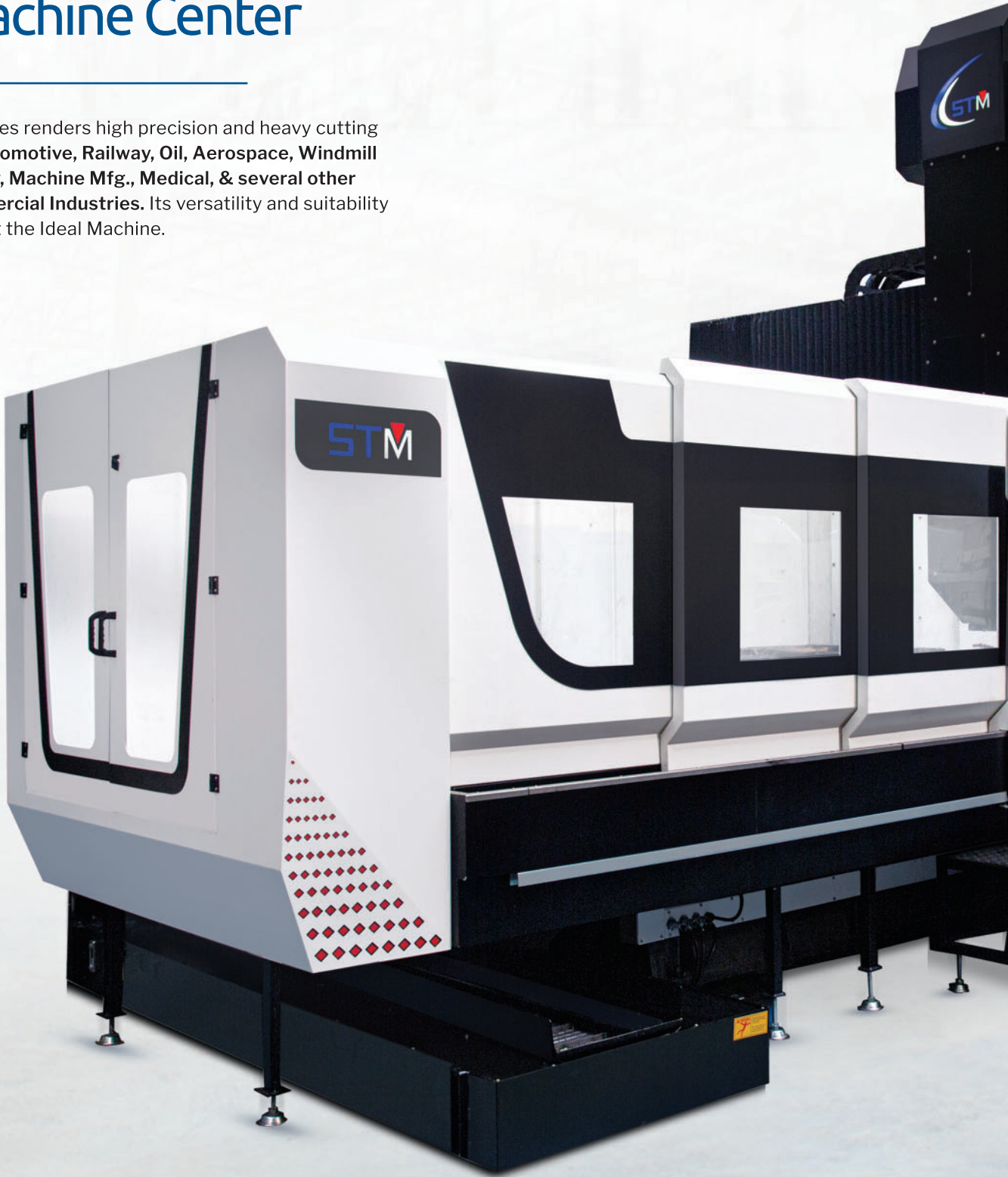


Winner of The Economic Times, Best Metal Cutting Brand Award for Three Consecutive Years.  
2020, 2021, 2022



# Double Column Machine Center

DL series renders high precision and heavy cutting for **Automotive, Railway, Oil, Aerospace, Windmill Energy, Machine Mfg., Medical, & several other Commercial Industries.** Its versatility and suitability make it the Ideal Machine.



## Various Milling Heads

### Automatic Clamping



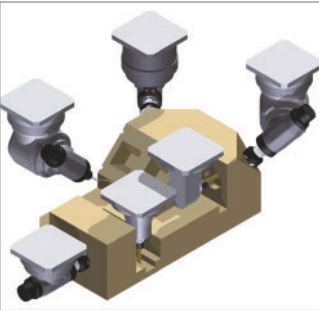
Automatic 90° Milling Head



Automatic Extended Milling Head



Automatic 2 – Axis Milling Head



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### Automatic Indexing and Manual Clamping



Semi-Automatic 90° Milling Head



Semi-Automatic 2-Axis Milling Head



Manual Speed 2-Axis Milling Head (8,000 rpm)



Manual 90° Milling Head



Manual Extended Milling Head



Manual Boring and Milling Head



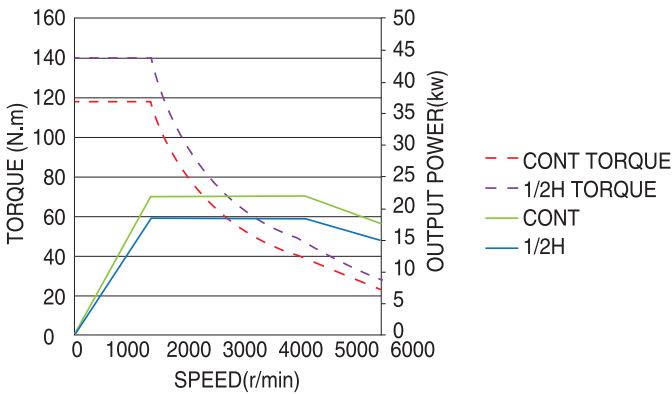
Manual 2-Axis Milling Head



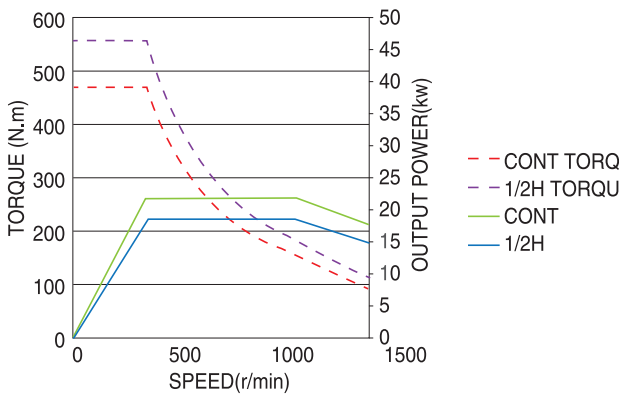
Manual Extended Milling Head



### Spindle Speed vs Torque chart



SPINDLE POWER TORQUE CHART(MITSUBISHI SJ-V22-01ZT)  
1:1 GEARBOX (HIGH SPEED)



SPINDLE POWER TORQUE CHART(MITSUBISHI SJ-V22-01ZT)  
1:4 GEARBOX (LOW SPEED)

### Energy Saving Z Axis Balance System

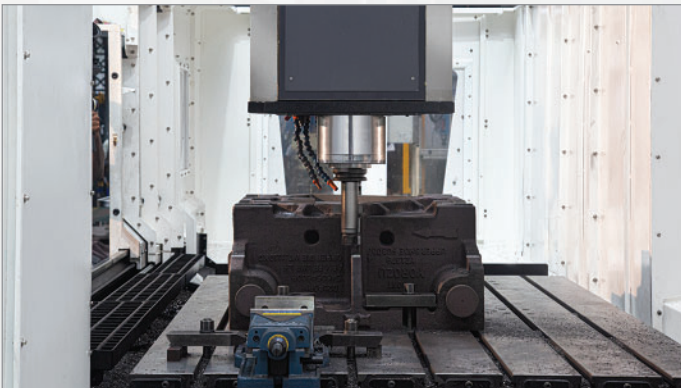
Z axis movement is counter- balanced by twin hydraulic cylinder and nitrogen accumulator. An bladder accumulator can equilibrate hydraulic pulsation caused pressure, such as hysteresis caused overcut. when abnormal power outage occurs, the Z axis position can be secured.

The whole system not only enhances the sensitivity of the Z-axis micro- movement, showing great flexibility and best dynamic stability, but also ensures the machine's optimal repeatability. In addition, it helps energy saving up to 30%.



### Safety Walkway

Standard for user-friendly operation and safety.



### ZF - Gear Box

ZF Gear box - Germany

High efficiency power transmission

Great torque output

All the bearings, gears and spindle have forced lubrication system to ensure a smooth operation of the gearbox and to make sure a constant temperature at all times





Features

1. Gear Box

Equipped with ZF gear box with gear ratio of 1:4 in all models to provide high torque & heavy cutting.

2. Base

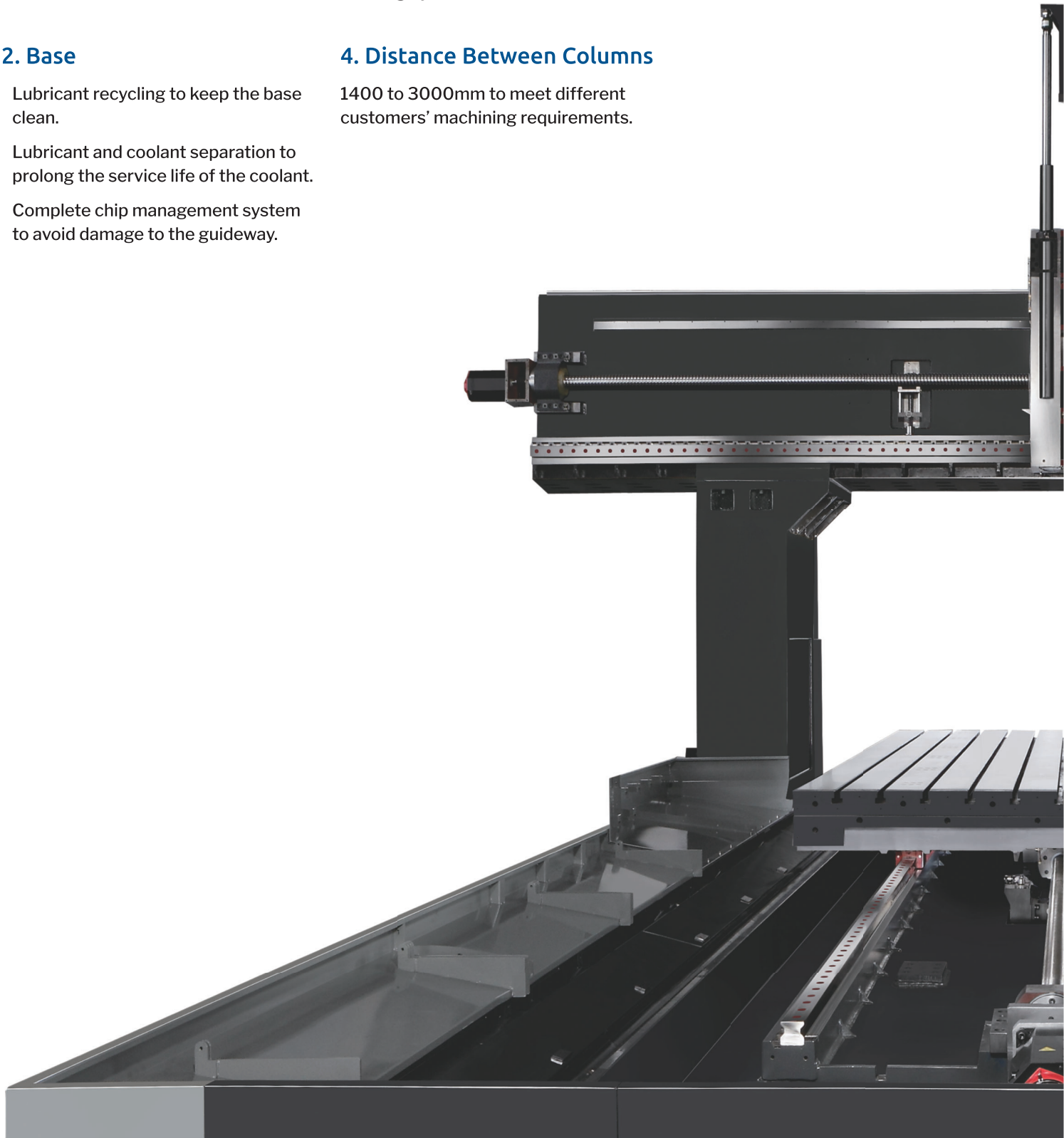
Lubricant recycling to keep the base clean.  
Lubricant and coolant separation to prolong the service life of the coolant.  
Complete chip management system to avoid damage to the guideway.

3. Linear Guideway

X axis is equipped with R55 roller type linear guideways for high rigidity and precision to achieve a long service life with highly accurate motion.

4. Distance Between Columns

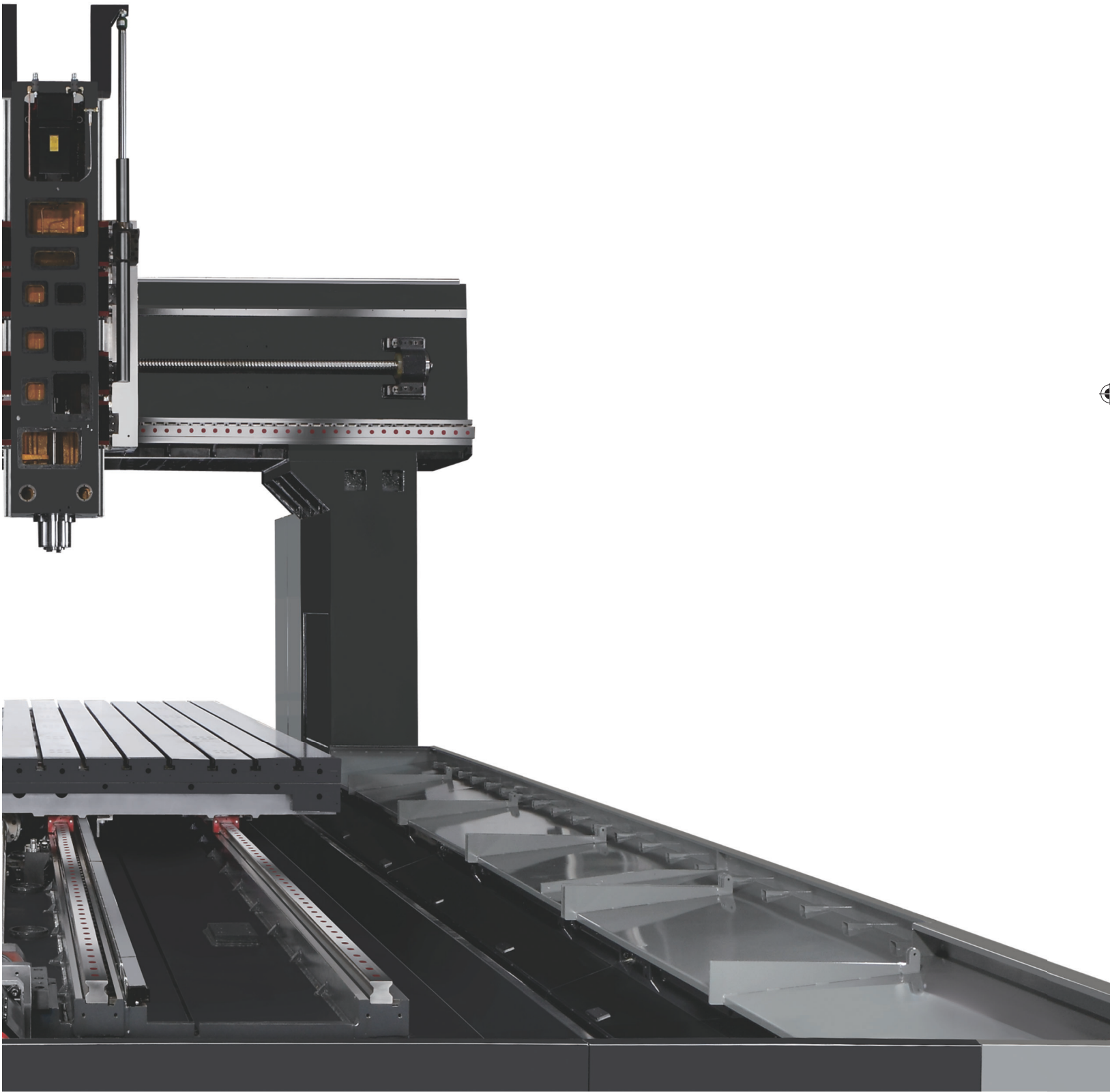
1400 to 3000mm to meet different customers' machining requirements.



STM MODEL	UOM	DL2114	DL2619	DL3119	DL3225	DL4225	DL3230	DL4230
3 AXES SERVO MOTOR								
X /Y/Z axis motor power	kW	7/7/7				9/9/9	7/7/7	9/9/9
ACCURACY								
Positioning accuracy(JIS)	mm	±0.005/300			-			
Positioning accuracy(VDI 3441)	mm	-			X&Y 0.02;Z0.012		X,Y,Z 0.020	X0.025; Y&Z0.020
Repeatability(JIS)	mm	±0.003/1000			-			
Repeatability (VDI 3441)	mm	-			X&Y0.02;Z0.012		X 0.013 Y0.014 Z0.013	X0.016 Y0.014 Z0.013
ATC								
ATC type	-	Arm type						
Tool magazine capacity	pcs	24 ( 32 Opt.)						
Max.tool size (Full Pocket/ Next Pockets empty)	mm	110/200						
Max.tool length	mm	350						
Max.tool weight	kg	15						
OTHERS								
Coolant tank capacity	liter	700L	1000					
Chip removal system	-	screw type						
Ball screw/ guideways lubrication	-	Oil type						
Lubrication tank	liter	4						
Power consumption	kVA	40			50	65		
DIMENSION AND WEIGHT								
Machine packing gross weight - approx.	kg	16500	21000	23500	33500	37500	38000	45000
Floor space ( L x W x H) approx.	M	5.2/3.4/4	6.4/3.5/4.5	7.5/3.5/4.5	7.2/4.2/4.3	8.5/4.2/4.3	8.3/5.8/5.6	10.3/5.8/5.6

Technical Specifications

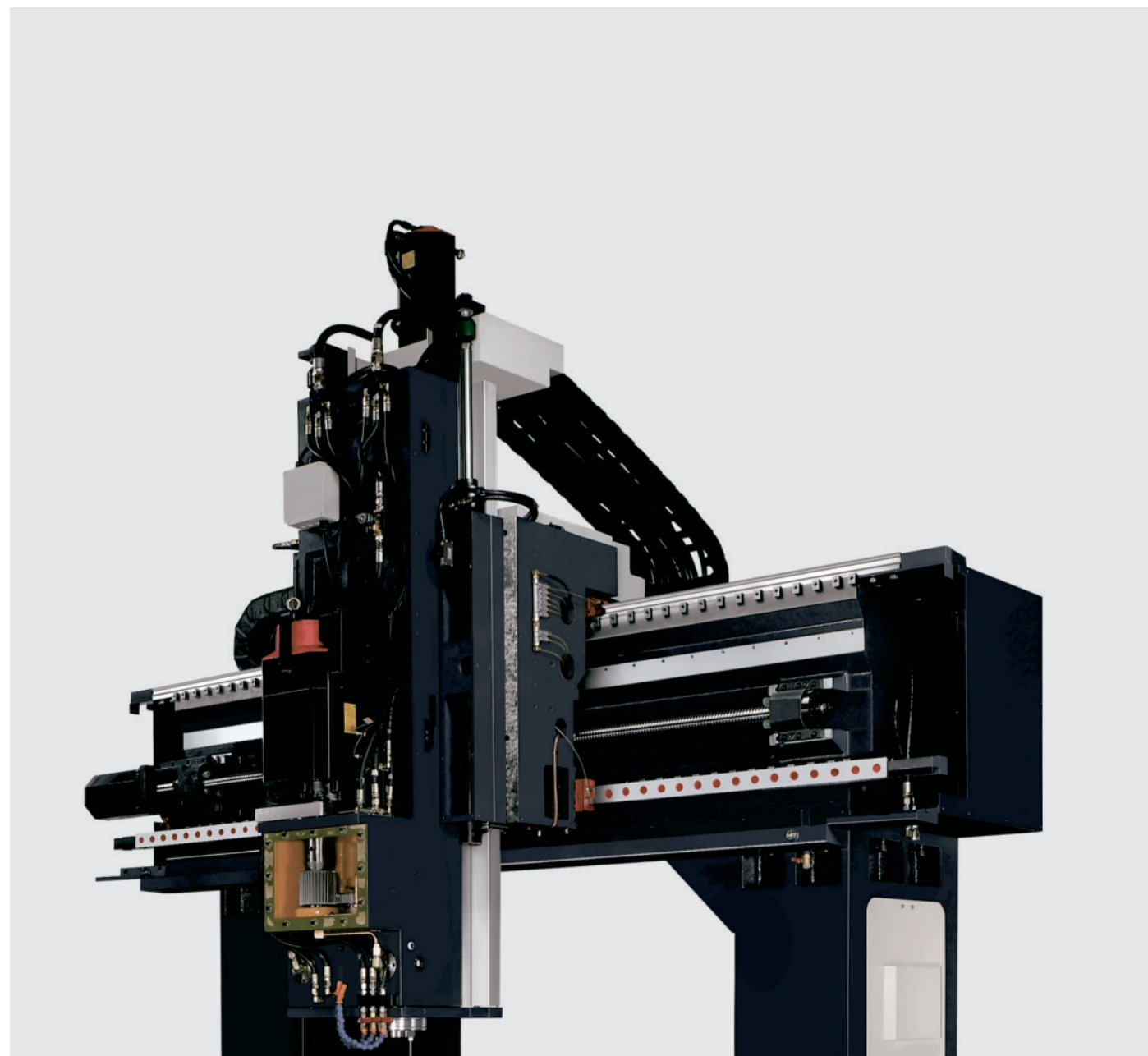
STM MODEL	UOM	DL2114	DL2619	DL3119	DL3225	DL4225	DL3230	DL4230
TRAVEL								
X axis	mm	2100	2600	3100	3200	4200	3200	4200
Y axis	mm	1400	1900		2500	2650	3150	
Z axis	mm	800	900		1000			
Distance from spindle nose to table	mm	150-950	150-1050		200-1200		250-1250	
Distance between two column	mm	1400	1900		2500		3000	
Max.workpiece width	mm	1300	1800		2400		2900	
WORKING TABLE								
Table length	mm	2000	2500	3000		4000	3000	4000
Table width	mm	1200	1500		2000		2200	
Table load	kg	4000	7000	9000	10000	12000	10000	15000
T-Slot (Width x number x pitch)	mm	22 x 140 x 7	22 x 160 x 9		22 × 180 × 9		28 x 200 x 11	
SPINDLE								
Spindle taper	-	BT50						
Spindle Speed/ gearbox brand	rpm	6000 / ZF Germany						
Spindle motor power (continuous)	kW	15/18.5 (18.5/22 Opt.)			18.5/22 ( 22/26 Opt.)		22/26	
Feed								
Rapid traverse X/Y/Z	m/min	15/15/10		12/12/10			10/12/10	
Cutting feedrate	mm/ min	8000						
X axis ball screw (diameter x lead)	mm	GQ50x10	GQ63x12		GQ80x20			
Y axis ball screw (diameter x lead)	mm	GQ50x10			GQ63x12			
Z axis ball screw (diameter x lead)	mm	GQ50x10					GQ63x10	
X axis gear ratio	-	1:1	1:2		1:3			1:4
Y axis gear ratio	-	1:1						
Z axis gear ratio	-	1:1						



## 14 & 19 Series

### High Speed, Fast & Precise

This series is built for efficiency, featuring both high speed and accuracy with linear guideway design which can achieve a long service life with high accuracy. This series is the perfect solution for efficient machining and heavy cutting.



## 25 & 30 Series

### Stable In Accuracy.

### Flexible In Length

The base is equipped with multiple sets of R55 linear guideway, a wider working table, and a prolonged X travel.

