

## TEM SERIES

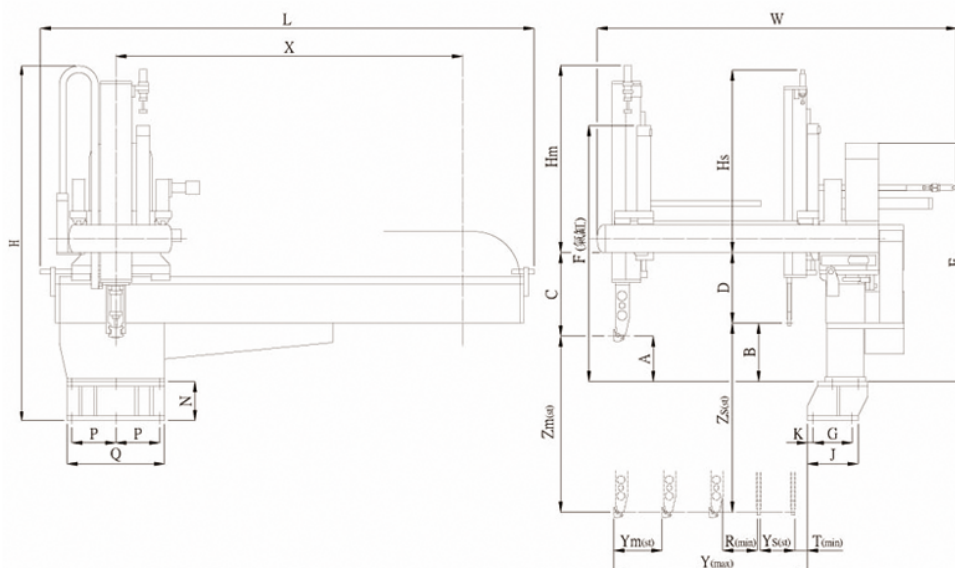
### Specifications

Model	TEM-1000 SN / DN
Suited for Injection Molding Machine	350 – 450 Tons
Power Source	220V ± 10%, 50/60Hz
Electric Consumption	5A
Air Pressure	6 kg / cm <sup>2</sup>
Drive System	Frequency Change Motor
Vertical Stroke ( Z ) mm	A: 1000 B: 1050
Take-Out Stroke ( Y ) mm	A: 400 B: 150
Traverse Stroke ( X ) mm	1780
Posture	90°
Max Grip Weight (Jig Weight Included)	8 kg
Air Consumption (NL / Cycle) (Pressure 5 kg / cm <sup>2</sup> )	S: 104.9 D: 135.8

\* SN: Single Arm, DN: Double Arm, A: Product Arm, B: Sprue Arm

\* All specifications, dimensions and design characteristics shown in this catalogue are subject to change without notice.

### Dimensions



Model	Zm	A	Zs	B	X	Y	Ym	Ys	R	T	Hm	Hs	E	C	D	F	G	J	K	P	Q	N	LxWxH
TEM1000	1000	250	1050	325	1780	1000	400	150	180	95	960	975	1125	415	340	1340	200	260	30	225	500	150	2510x1875x1790
TEM1200	1200		1250		2020	1180	500				1050	1065				515						440	1440
TEM1400	1400	200	1450	275	2490	1360	1140				1155	515		440	1540	400						2750x2105x2220	
TEM1600	1600	150	1650	225	2490	1360	1240				1275	515		440	1640	550						3220x2460x2490	
TEM1800	1800	100	1850	175	2730	1540	1340				1365	565		490	1740	700						3450x2660x2730	
TEM2000	2000	70	2050	125	3370	1780	1440				1455	595		540	1840	750						4100x2805x2870	

★ - Not Applicable

## DIALOG CONTROLLER, EASY TO CONTROL.

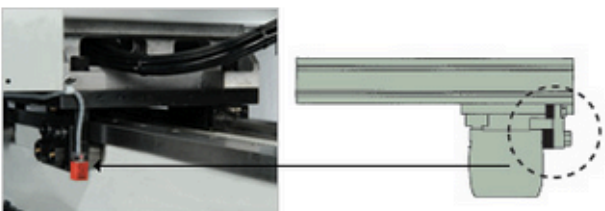
- The control system meets CE, SPI and EUROMAP standards, which are compatible with injection molding machines all over the world.
- Remote wire controller with the LCD display for easy reading. The screen capacity is 120 Chinese characters.
- Choice of Chinese, English, Portuguese and French display on screen..
- 16 bit CPU provides powerful editing functions for deletion, insertion and replacement.
- The program copy function, in conjunction with the editing programs meet and modification function, provides easy program
- 60 sets standard programs combined with 40 sets editing programs meet requirements for any type of mold.
- The operation panel and the control are separated, permitting convenient operation at any position. Machine interface contains: Mold clamp interlock, injection interlock, mold eject interlock, safety door control, product counting and cycle time.
- Specially designed outside mold hold function suits extra high mold and molds with core cylinders. This prevents molds from bumping against the robot, while allowing the robot to develop its best performance.
- Middle Platen Confirmation Device (optional): A safety guard to prevent the middle platen bumping against the robot resulting from incorrect positioning of the middle platen.



## SUPERIOR PERFORMANCE

### TENSO ROBOTS - Integrate Fine Feature in One

- The traverse stroke is driven by an imported, high performance, frequency change brake motor for variable speed adjustment and the brake can be micrometrically adjusted to meet mold variations.
- The traverse stroke of the product arm is controlled by an encoder, providing 1-9 points of products release (optional).
- The rack and rail on the traverse stroke are constructed of one piece, offering extreme stability and rigidity.
- The sprue releasing position for the sprue arm can be set as desired on the traverse stroke.
- Exclusive anti-braking design. The brake unlock is performed instantly in the event of power failure.
- The take-out stroke for the product and sprue arm employ double linear motion guides providing an effortless, smooth and vibration free stroke.
- The machine has an innovative automatic speed slow-down on the vertical stroke for the product and spure arm when in manual control mode. This will avoid operation error and provide protection for the mold.
- Advanced injection confirmation signal.
- **The specially designed sprue alarm eliminates wire breakage or poor sensitivity problem, which usually occurs on a magnetic spring sensor or proximity sensor. The service life can reach over 10 years.**
- The sensor on the sprue arm employs an imported Japanese proximity switch, for fast and accurate checking of various sprues.
- A large, durable, flexible strip is provided to prevent the electrical wires and air circuit pipes from being damaged.
- The product and spure arms feature fast pick and slow release, which provide a safer working area.
- The gripping, suction and holding pressure on the product arm can be adjusted to prevent damage to the product surface.
- **The PU hoses and quick connectors in pneumatic circuits employ imported high quality parts for crack-free performance. The service life can reach over 10 years.**
- The sprue picking position can be adjusted to meet sprue variations.
- All components on this robot are made by modular manufacturing for superior interchangeability.
- The barrels for the product arm and sprue arm are manufactured from Aluminium alloy, featuring less weight, high durability, and wear-resistance. High stability in fast operation cycles.
- Equipped with a large capacity air reservoir to minimize air pulsation, while ensuring stable motions (TEM series)
- Heavily constructed throughout. Fast cycle time and maximum operation stability.
- Comprehensive motor position systems are easy for operation and jig installation (TEH & TEM series).
- Specially designed double action arm drop prevention for maximum safety.
- The TEM series is designed with double linear motion guides that increase loading capacity of arm and service life. The N type is a two-section configuration to reduce installation height, marking the robot suitable for low-roof factories.
- The second step of the vertical stroke is transmitted by a steel reinforced belt. Simultaneous motions for the first and second strike give fast stroke speed (TEH & TEM series)



"T" type bearing is an "E" shape construction. It provides triple the safety coefficient than double guides on competitive models.



#### DOUBLE LINEAR MOTION GUIDE ON TAKE-OUT STROKE

The take-out stroke of the product and sprue arm employ double linear motion guides, providing an effortless, smooth, and vibration free stroke.



#### COMPREHENSIVE MOTOR POSITIONING SYSTEMS

The vertical stroke positioning can be easily controlled from the control panel, eliminating troublesome climbing up and down.



#### CENTRALIZED SPEED CONTROL

All motions speeds are controlled by the special air exhaust speed controller.



#### ONE PIECE FABRICATED RACK AND RAIL

The traverse-in and traverse-out strokes employ rack and motion guide for increased stability of motion.



#### QUALITY MODULAR PARTS

Some components are manufactured from Chrome Molybdenum alloy steel, which is manufactured by dewax casting.



#### MOTOR DRIVE TAKE-OUT STROKE

The take-out stroke positioning can be easily controlled from the control panel, eliminating troublesome climbing up and down.



#### EXCLUSIVE STEEL REINFORCED BELT TRANSMISSION

Eliminated the conventional timing belt transmission as with competitive models. Tenso robots employ steel reinforced belt transmission on the second step of the vertical stroke. It features triple the safety coefficient compared to the conventional belt and has been used on over 5,000 robots without defect.



#### DOUBLE LINEAR MOTION GUIDES ON VERTICAL STROKE

Two step vertical stroke employs double linear motion guides. The second step of the vertical stroke is transmitted by a steel wire belt. Simultaneous motions for the first and second stroke give fast stroke speed.



#### MOTOR DRIVE TRAVERSE STROKE

The traverse stroke is driven by a high performance, frequency change brake motor for variable speed adjustment. The brake can be micrometrically adjusted to meet mold variations. The traverse stroke of the product arm is controlled by an encoder, providing 1-9 points of product release.