Our offices and agents

T series (90-220Ton)

The reliable all- rounded IMM

WELLTEC MACHINERY LTD.

10/F, Billion Plaza 2, No.10 Cheung Yue Street,
Kowloon, Hong Kong
Tel: + 852 2431 2198
Fax: +852 2433 7060
Website: www.welltec.com.hk
E-mail: info@welltec.com.hk

Version: Tseries-202004W

www.welltec.com.hk

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The reliable all- rounded IMM

Enhanced essential function for efficient and stable production

Driven by intelligent servo system, T series combine fast-response servo motor with high precision servo driver coupled with a sophisticated controller to offer an affordable package that guarantees a high cost effectiveness and low energy consumption at the same time.

Major and critical components supplied by leading brands, spacious clamping unit, robust machine base, accurate heaters and flexible combination of screw and barrel contributes the distinctive ability to cater for most of the mass-market production needs while keeping the initial and operating cost at the minimal.

Signature square mould platens disperse the moulding stress evenly to ensure excellent clamping efficiency, and better protect the mould for prolonged use. Mould height adjustment is no longer a hassle thanks to the adjustment gear.

Ergonomic machine designs and human-machine interface ensures the highest user and workman-friendliness.“Easy-to-service" machine designs philosophy is embraced to minimise the unplanned machine down-time, and thus enhance the overall efficiency.

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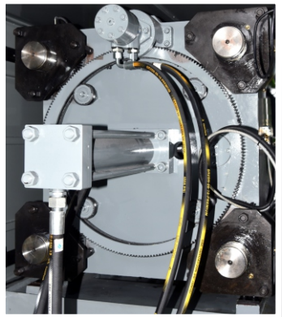


Hydraulic gear mould adjustment

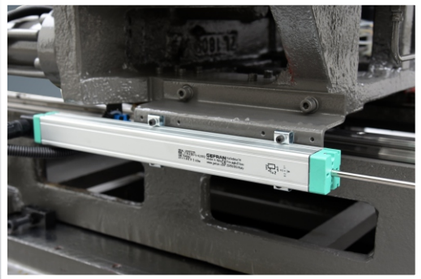
01

Auto-adjust mechanical safety bar

02

Dual CPU controller

03

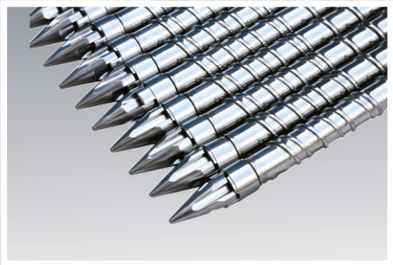


High precision transducer

04

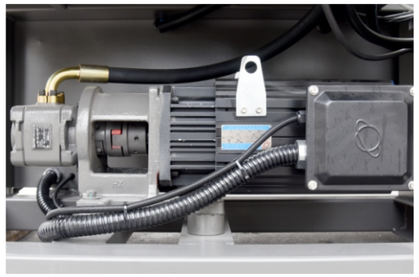
Optimised lubrication design

05



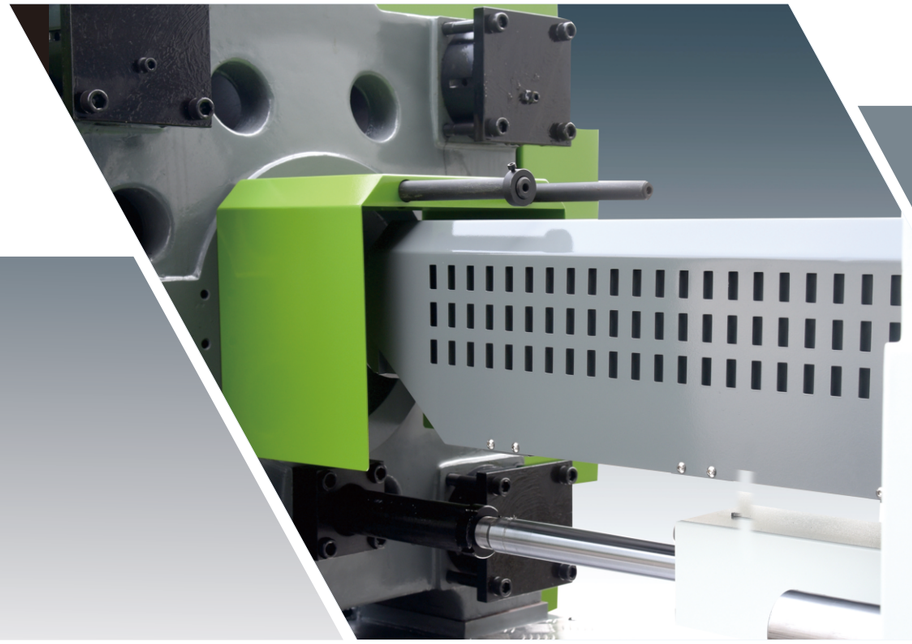
Flexible screws and barrels combination

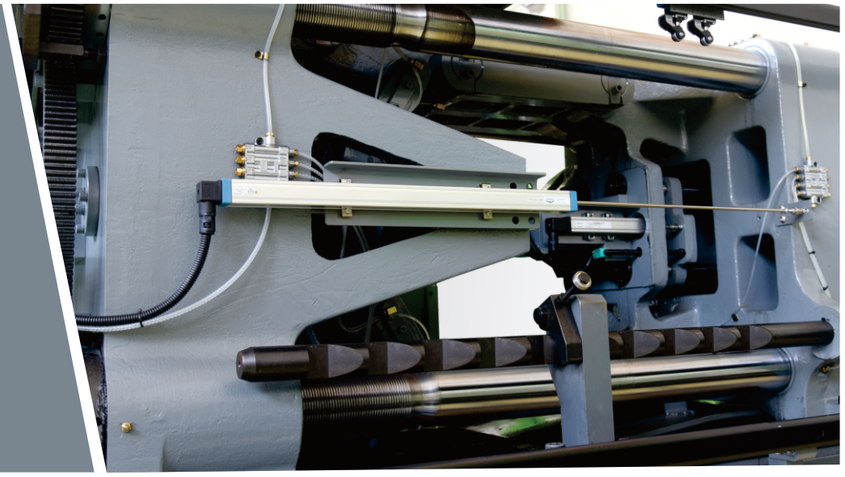
06



Servo motor and gear pump

07





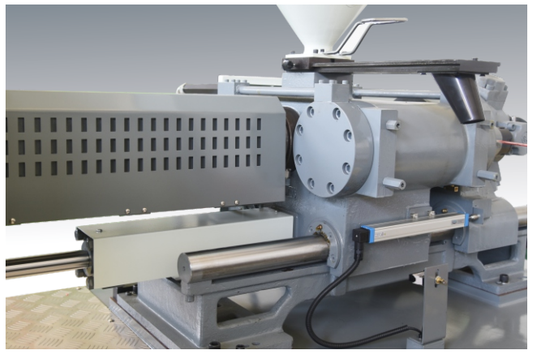
Injection Unit

Compact and forceful double-cylinder injection system to achieve stable injection and uniform stress-distribution through the fixed platen which guarantees the minimal platen deformation. Excellent plasticising rate and resin mixing attained through optimised screw assembly.

Nozzle, screw head set are made by tool steel imported from Japan with high tensile strength. Resistance to high temperature, wear and tear, thermal-corrosion and yet remaining high hardness are attributable to the special heat treatments.

Nitrified screw and barrel are made of industrial grade alloy steel that is characterized by its high hardness, high-heat and wear-resistance.

Moulding quality and high reproducibility are supported by excellent PID temperature control in combination with high precision linear transducers and controller to control the speed and pressure for injection, pressure-holding, plasticising and back pressure. Double-cylinder integrates with linear guide rail to facilitate low-resistance and accurate injection carriage movement.

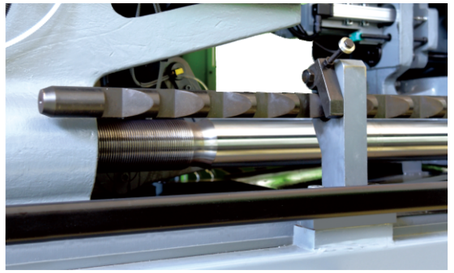


Auto purging , anti- drooling and cold-start prevention devices enable easy maintenance, equipment safety and high efficiency productions.

Clamping Unit

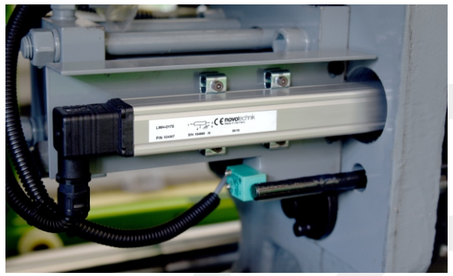
New generation designs of clamping toggle to ensure fast yet accurate motions of the moving platen. Along with the square-shaped platens and high rigidity clamping toggle to enable anti-fatigue and high strength capabilities.

Moulding area with larger distance between tie bars and longer opening stroke accommodate bigger and thicker moulds for wider production varieties.



Mould Adjustment Unit

Shorter mould loading time is supported by the optimised hydraulic and automatic mould adjustment device featured with the gear motor.



Servo-driven Hydraulics

- **High precision**
  Accurate control of system pressure, flow and positions for various machine motions to ensure highly reproducible injection shot weight within tolerance of max **0.3%**, precision moulding is no longer unachievable
- **Fast response**
  0.5 second from zero output to the maximum to greatly enhance production efficiency
- **Low noise**
  Less than **80** dB even under high speed operation, particularly suitable for cleanroom workshops

- **Energy- saving**
  Energy consumption is **30-80%** less than conventional injection moulding machine driven by variable displacement pump. Class 1 (Top) energy saving grade awarded
- **Cooling water-saving**
  Greatly minimizing cooling water usage achieved by preventing unnecessary high pressure relief due to absence of excessive hydraulic output

Dual CPU Controller

- Featured with X 86 300 MHz HMI and RISC 140MHz microprocessor to enable high-speed control, low energy consumption and high resistance to interference
- 8.4" TFT display
- User-friendly HMI
- Standard 8 zones PID temperature control . 1℃ each step
- Standard 32 sets I/O, extension board available
- USB devices to store mould parameters
- Historical records for injection end position, barrel temperature, setting parameter changes and error alarms
- Multi-language selection

Standard Items

Injection Unit

- Double-cylinder injection system
- High performance screw and barrel
- Multi steps of injection / holding pressure / speed
- Injection position by transducer control
- Screw cold-start prevention system
- Nozzle centering device
- Injection / Pressure- holding switchover controlled by time or position
- Low speed high torque plasticising motor
- Screw RPM sensor
- Water cooling for hopper feeding throat

Clamping Unit

- Transducer for mould open / close position control
- Mechanical safety interlock
- Five points double toggle clamping unit
- Square shaped platen for uniform moulding stress distribution
- Multi steps of mould open / close / speed / position / pressure
- Fast mould - close function
- Automatic mould height adjustment
- Low- pressure mould protection
- Automatic lubrication

Hydraulic Unit

- Servo system
- Oil suction filter
- Oil temperature control and alarm
- Bypass oil filter

Control Unit

- 8.7" LCD colour display
- 200 sets of mould memory
- Barrel temperature detector
- Thermocouple break alarm
- System hardware testing function
- Interface for printer
- Electric motor safety protection
- Emergency stop device

Accessories

- Levelling pads
- Tool kit
- Consumables
- Mould clamps

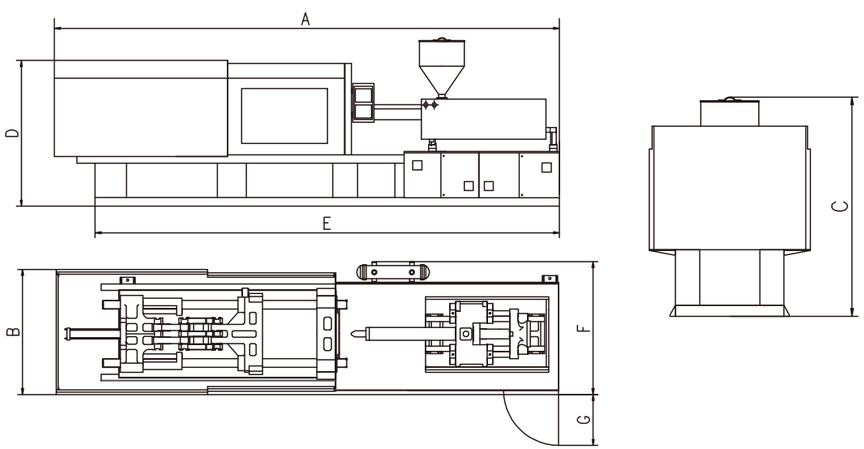
Machine Specifications

Item	Unit	T90			T130			T170			T220		
INJECTION UNIT													
Theoretical shot volume	cm^3	113	154	181	215	263	302	277	318	392	381	471	570
Shot weight	g	106	144	170	196	239	274	260	298	368	347	429	520
Shot weight	oz	3.7	5.1	5.9	6.9	8.4	9.6	9.1	10.5	12.9	12.1	15	18.1
Screw diameter	mm	30	35	38	38	42	45	42	45	50	45	50	55
Injection pressure	MPa	252	185	157	193	158	138	190	166	135	217	176	145
Length/ Diameter ratio	L/D	23:1	20:1	18:1	22:1	20:1	18:1	21:1	20:1	18:1	22:1	20:1	18:1
Injection stroke	mm	160			190			200			240		
Screw speed	rpm	0~210			0~220			0~220			0~210		
CLAMPING UNIT													
Clamping force	Ton	90			130			170			220		
Clamping stroke	mm	320			380			430			480		
Distance between tie bars	mmxmm	360x360			410x410			460x460			510x510		
Mould thickness range	mm	150~360			160~450			200~530			200~550		
Max. daylight	mm	680			830			960			1040		
Ejection stroke	mm	100			120			140			150		
Ejection force	Ton	3.4			4.2			5			6.7		
POWER UNIT													
Hydraulic system pressure	MPa	17.5			17.5			17.5			17.5		
Pump motor(s)	kW	14			17.6			17.6			23		
Heating power	kW	6.5			7.7			9.9			11.3		
Number of heating zones	unit	3+nozzle			4+nozzle			4+nozzle			4+nozzle		
GENERAL													
Oil flling capacity	L	160			200			210			310		
Machine dimensions (LxWxH)	mxmxm	4.4x1.0x1.7			4.6x1.1x1.8			4.8x1.2x2.0			5.4x1.3x2.1		
Machine weight	Ton	3.2			4			4.8			6.5		

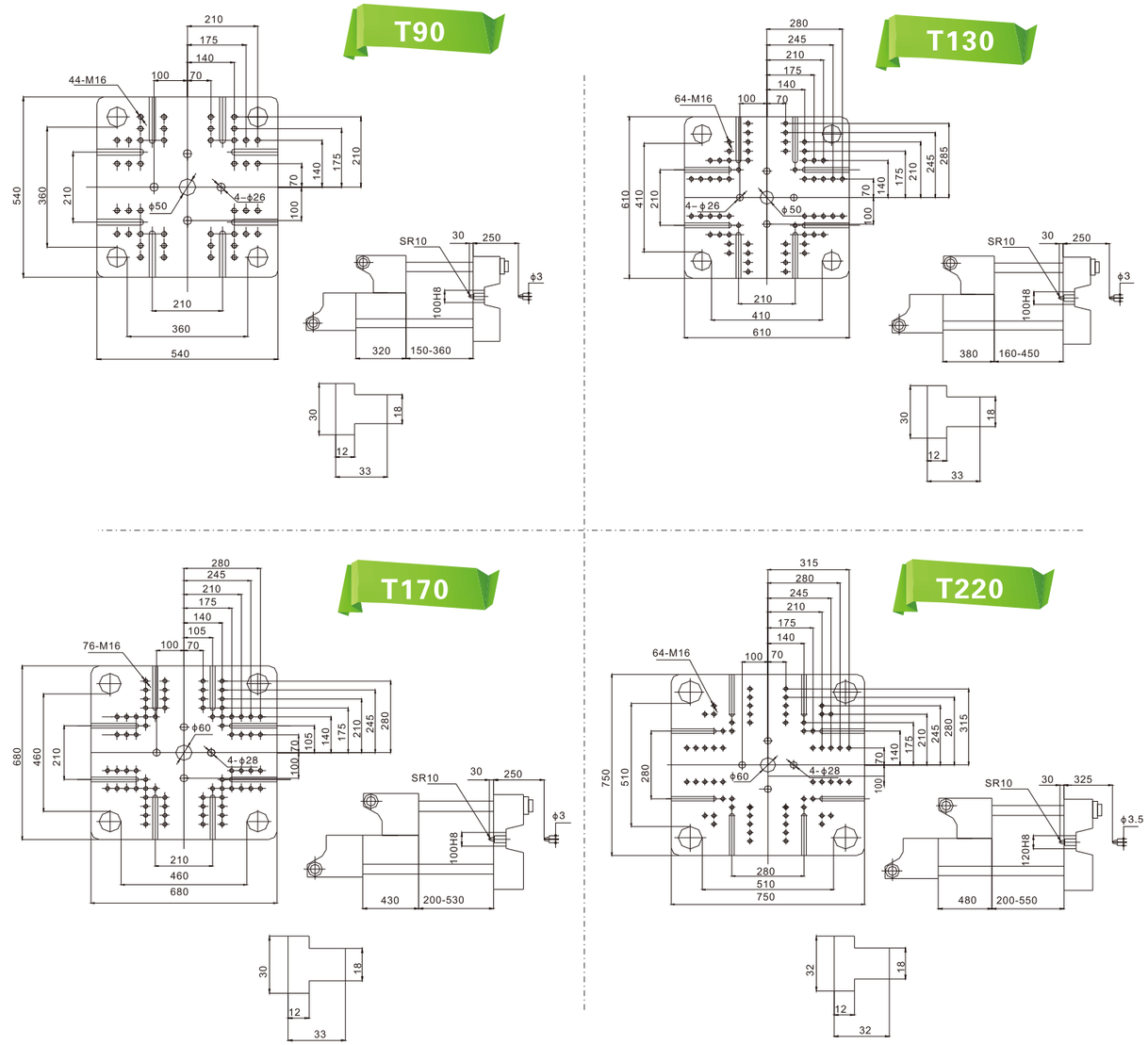
■ We are always working on improvement and re serve the rights to change design and specifications without prior notice

Machine Dimensions

T90-T220



Platen/Nozzle Dimensions



Model	A	B	C	D	E	F	G
T90	4400	1000	1700	1500	3500	1000	400
T130	4600	1100	1800	1600	3900	1100	500
T170	4800	1200	2000	1700	4000	1200	500
T220	5400	1300	2100	1800	4600	1300	500