

ENGEL e-motion 30TL

All-electric, tie-bar less



The smaller the moulded parts, the higher the demand for quality and precision: The **smallest precision parts**. It is a sophisticated combination of the **all-electric** Its outstanding **platen parallelism** and **highest dynamics** enable a fast and **cleanroom quality**.

ENGEL e-motion 30TL **clamping unit**

- generous, barrier-free mould space
- outstanding platen parallelism
- encapsulated toggle lever
- perfect clamping force distribution



new **ENGEL e-motion 30TL** defines a new standard for the **production of the** ENGEL e-motion machine concept with the proven ENGEL **tie-bar-less** system. failure-free production: from short-pitch connectors to precise optical parts – all in

ENGEL e-motion **injection unit 50**

- high process stability
- short cycle times
- compact design
- reduced maintenance costs



ENGEL e-motion **clamping unit**

tie-bar less, precise, clean, durable

generous, barrier-free **mould space**

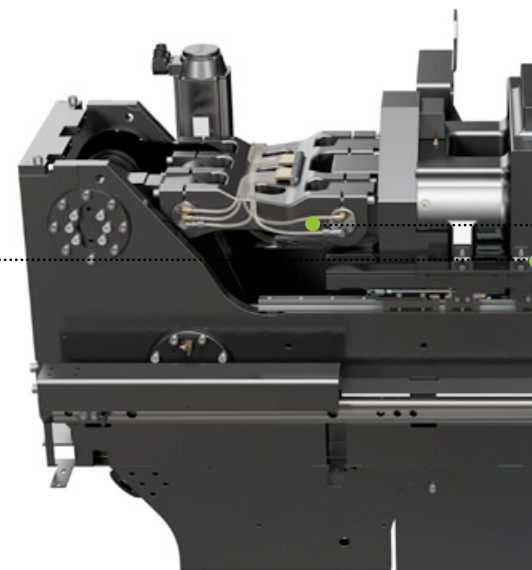
Increased flexibility due to the proven ENGEL tie-bar-less concept. The innovative frame concept of the ENGEL e-motion 30TL offers you an ideal access to the mould area and a generous mould mounting situation of 440 x 420 mm. Your bonus: Due to the compact design, the ENGEL e-motion 30TL can be easily placed in your production facility.

outstanding **platen parallelism**

When it comes to platen parallelism ENGEL is not willing to compromise: The ENGEL e-motion 30TL clamping unit is set up using a highly sensitive platen parallelism setting system prior to delivery. Later adjustments are possible, thus guaranteeing a long service life of machine and mould.

perfect **clamping force distribution**

Minimum tolerances, maximum output: FEM-designed mould mounting platens guarantee almost perfect clamping force distribution (maximum deviation of 2%). The result is a high level of precision and reduction of rejects especially when producing high-sensitive applications such as lenses for cell phone cameras.





Specification clamping unit		
Clamping force	to/kN	30/300
Opening stroke	mm	230
Mould height	mm	150 - 330
Mould fixin platen h x v	mm	440 x 420
Delivery chute width	mm	320
Ejector stroke	mm	75
Ejector force	kN	10
Mould weight max. moving platen	kg	230
Dry cycle time	sec/mm	0,9/200



encapsulated **toggle lever**

Production at cleanroom standards: The patented sealings ensure that no lubrication oil can leak from the bushings. All lubrication points are supplied simultaneously via metering elements, while the oil pressure is monitored continuously

ENGEL e-motion **injection unit 50**

precise, fast, powerful, durable

short **cycle times**

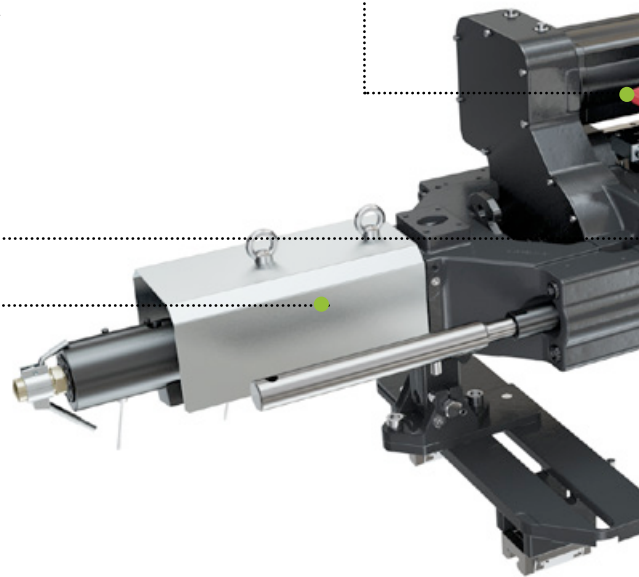
Top-level acceleration: The dynamic servomotors of the ENGEL injection unit 50 accelerate the injection movement from 0 to 500 mm/s in less than 30 ms. This outstanding increase in speed in combination with highest injection speed offers the best performance, especially at short injection strokes. An injection speed of up to 800 mm/s is available in "premium" execution

compact **design**

Space saving production with machines of up to two clamping force classes smaller: That is one main benefit of the new ENGEL e-motion 30TL with the proven ENGEL tie-bar less system. The generous mould mounting area admits to mount even bigger moulds in this compact machine. Additionally, valuable production space can be saved by the small dimension of this machine.

highest **process reliability**

Perfect control of dynamic injection processes: With the ENGEL e-motion 30TL all relevant positions are measured with encoders of the servo-motors (repeatability +/- 0,01mm). The injection-, holding- and backpressure are measured with a sensor mechanical connected to the screw. The maintenance-free pressure sensor impresses with its extremely high resolution and duration.





Specification injection unit		Standard	High	Premium
Screw diameter	mm	15 / 18 / 20	15 / 18 / 20	15 / 18
Screw stroke	mm	80	80	80
Injection capacity	cm ³	14,1 / 20,4 / 25,1	14,1 / 20,4 / 25,1	14,1 / 20,4
Screw speed	min-1	450	450	450
Screw torque	Nm	45 / 75 / 120	45 / 75 / 120	45 / 75
L/D ratio	L/D	24	24	24
Recovery rate	g/sec	2,8 / 4,2 / 6,0	2,8 / 4,2 / 6,0	2,8 / 4,2
Injection rate	cm ³ /sec	58 / 84 / 104	88 / 127 / 157	141 / 204
Spec. Injection pressure	bar	2400 / 2400 / 2000	2400 / 2400 / 2000	2400 / 2400
holding pressure	bar	2160 / 2160 / 1800	2160 / 2160 / 1800	2160 / 2160
Nozzle stroke	mm	200	200	200
Nozzle contact force	kN	20	20	20



reduced **maintenance costs**

Long service life due to optimised lubrication: The ENGEL e-motion 30TL is equipped with a permanent oil bath lubrication system for the ball screw spindles. This guarantees consistent lubrication conditions without requiring a lubrication oil-cooling. The benefit: one oil-change per year is sufficient.

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