

NEO

discover our new series

- NEO · T** New High-end Toggle system IMM
- NEO · H** New High-end Two-Platen IMM
- NEO · E** New High-end Electric IMM
- NEO · M** New High-end Multi-Component IMM



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tederic
SMART INJECTION

01

Introduction

Design
drives
change.



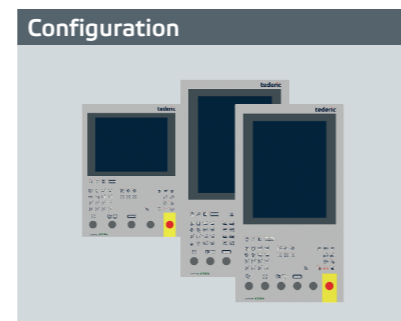
NEO

Design drives change, evolution, usability and functionality

NEO series is jointly created by the top design team in the world and tederic team, which embodies more than 10 years of technical accumulation of tederic and also fully displays the industrial aesthetics. It combined perfectly the world's leading industrial design, high-end components and advanced design concept, which brings a better user experience.

Controller

- Professional controllers, has dozens of years experience accumulated.
- Multiple dimension of screen available from 12 to 21 inches.
- Screen available by key screen and touch screen, optional of high-end multi-touch screen. Support for multiple data interface protocol, like OPC UA, Modbus.
- Massive amounts of mold process data & production process data.
- Open programming, enable to develop secondary programs, to meet a variety of special process requirements.



Safety Standard



Supported Languages



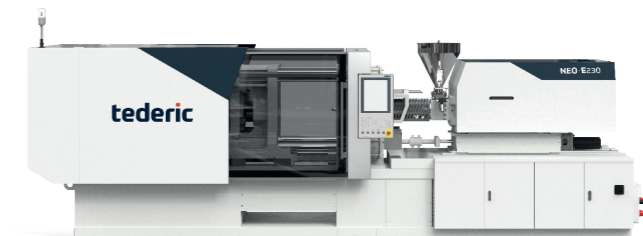
NEO·T



NEO·H



NEO·E



NEO·M



02

NEO·T

New high-end
toggle system
injection molding machine

NEO·T

New High-end Toggle System IMM

NEO·T adhering to the design concept of minimalist elegance, every line, every detail, every piece are born for the optimization of performance.

Clamping force: 90t – 4000t

Stable, Precise, Energy-saving, Flexible

Main application sectors



Packaging



Construction



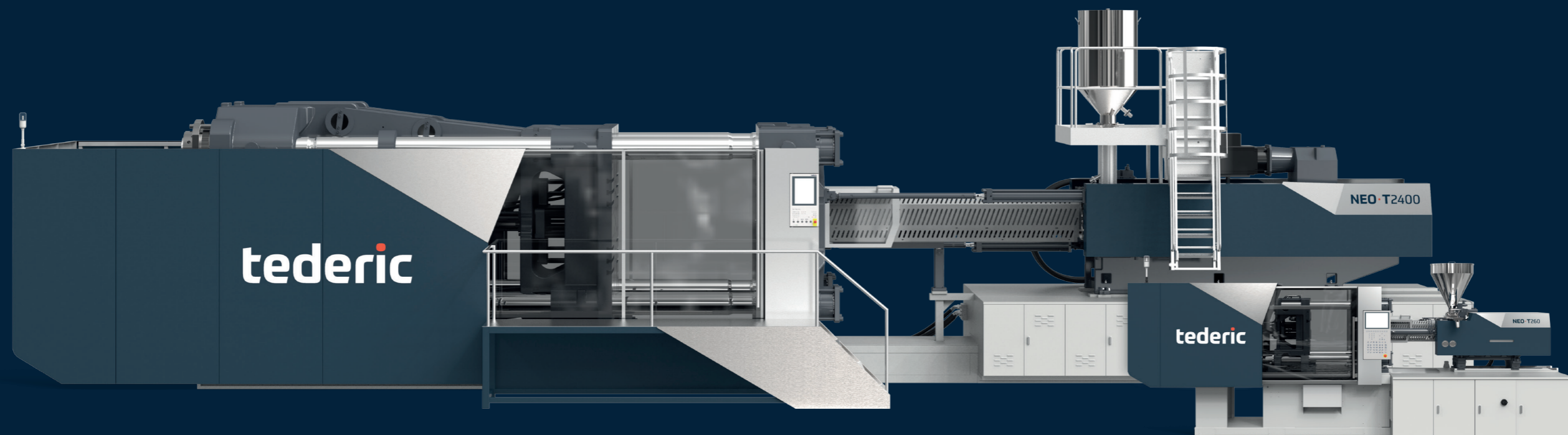
Home Appliances



Logistics



Environmental Protection



NEO-T

Clamping Unit

Technical Advantages

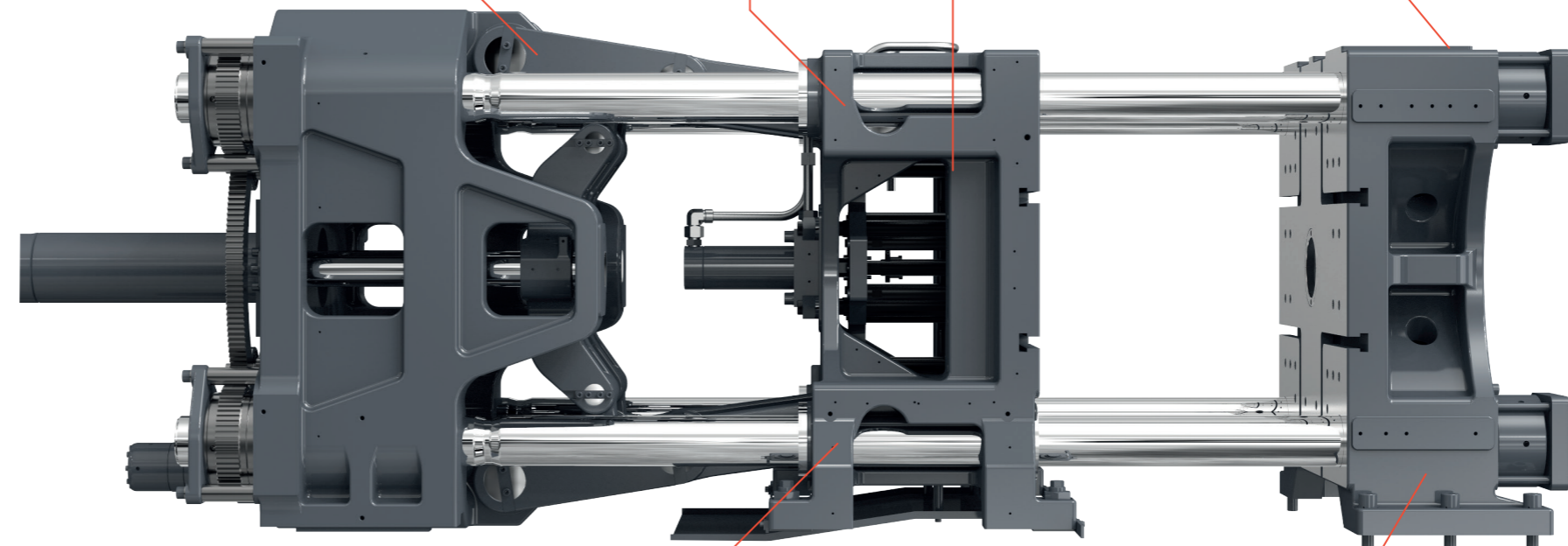
- Mould open position repeat accuracy $\leq 1\text{mm}$
- Max.mold weight increase 15%
- Tie bar unbalance rate $\leq 4\%$
- Self-made key units, high precision components and short delivery time

Ultra-high rigid platen structure
Built-in pin shaft provide the larger clamping space, improve the rigidity of the clamping unit and reduce the length.
NEO-T260 as an example, the main stress reduce 25% and length reduce 200mm.

Lubrication of toggle and guide sleeve
Automatic oil lubrication pump+detector distributor , nice looking and easy to use.

Open and close mold brake oil circuit design
Improve the end position of mold opening to be more accurate.

Standardized robot mounting:
Euromap standard robot mounting hole pattern.



The sliding foot of the moving platen is extended and the adjustable support device
it can support increase the mold bearing load by 15% with better paralelism and simply adjustment.

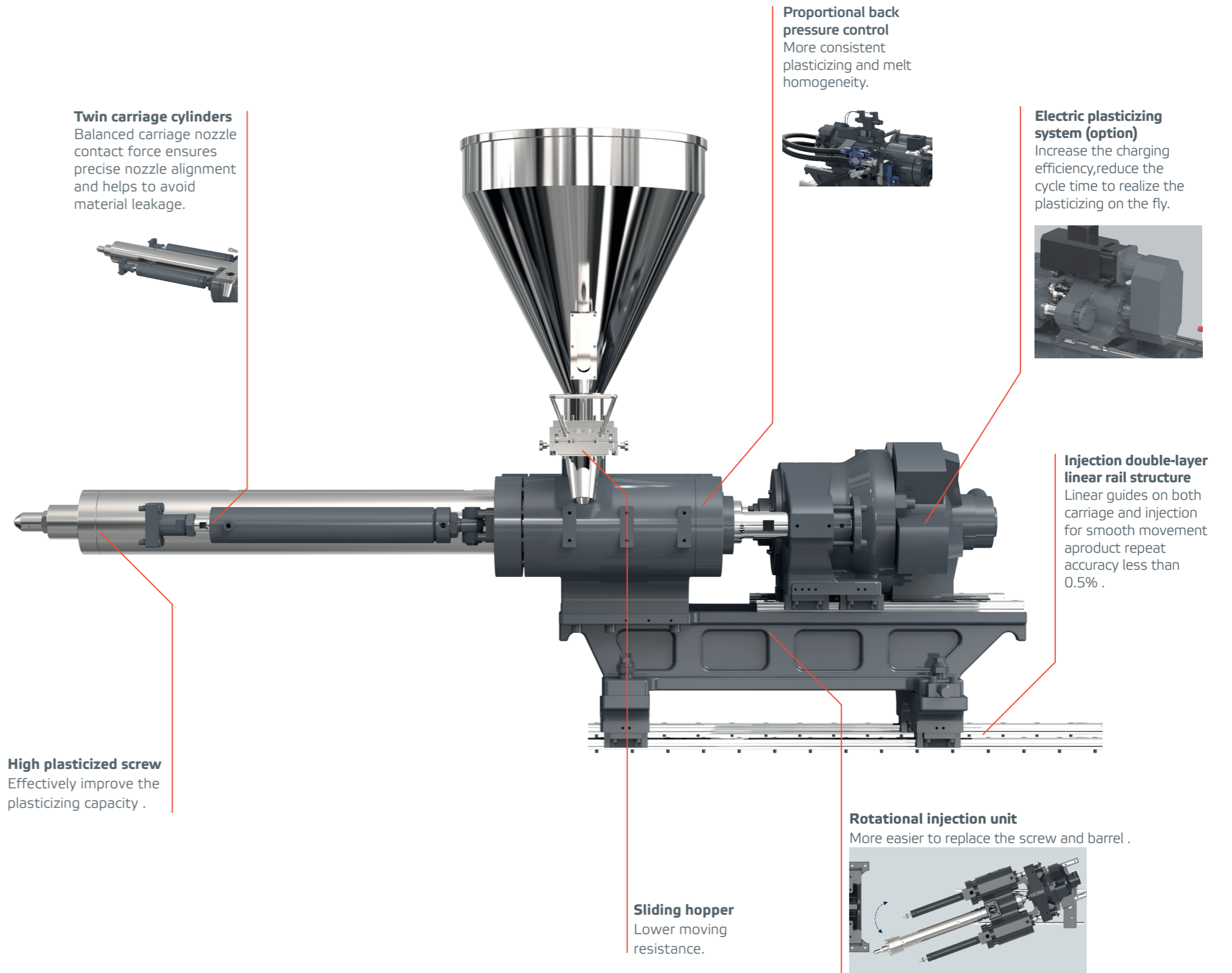
Box type structure
Reasonable layout ensures low deformation, even press distribution, better tie bar positioning and fully improved performance.

NEO-T

Injection Unit

Technical Advantages

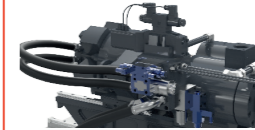
- Module design
- Injection repeat accuracy less than 0.5%
- Temperature control of barrel $\leq \pm 1^\circ\text{C}$
- Injection speed is improve by 15~30% for small IMM while 5~10% for large IMM



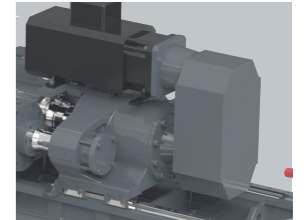
Twin carriage cylinders
Balanced carriage nozzle contact force ensures precise nozzle alignment and helps to avoid material leakage.



Proportional back pressure control
More consistent plasticizing and melt homogeneity.

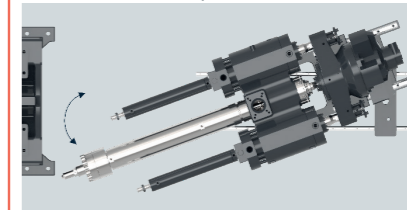


Electric plasticizing system (option)
Increase the charging efficiency, reduce the cycle time to realize the plasticizing on the fly.



Injection double-layer linear rail structure
Linear guides on both carriage and injection for smooth movement a product repeat accuracy less than 0.5% .

Rotational injection unit
More easier to replace the screw and barrel .



Sliding hopper
Lower moving resistance.

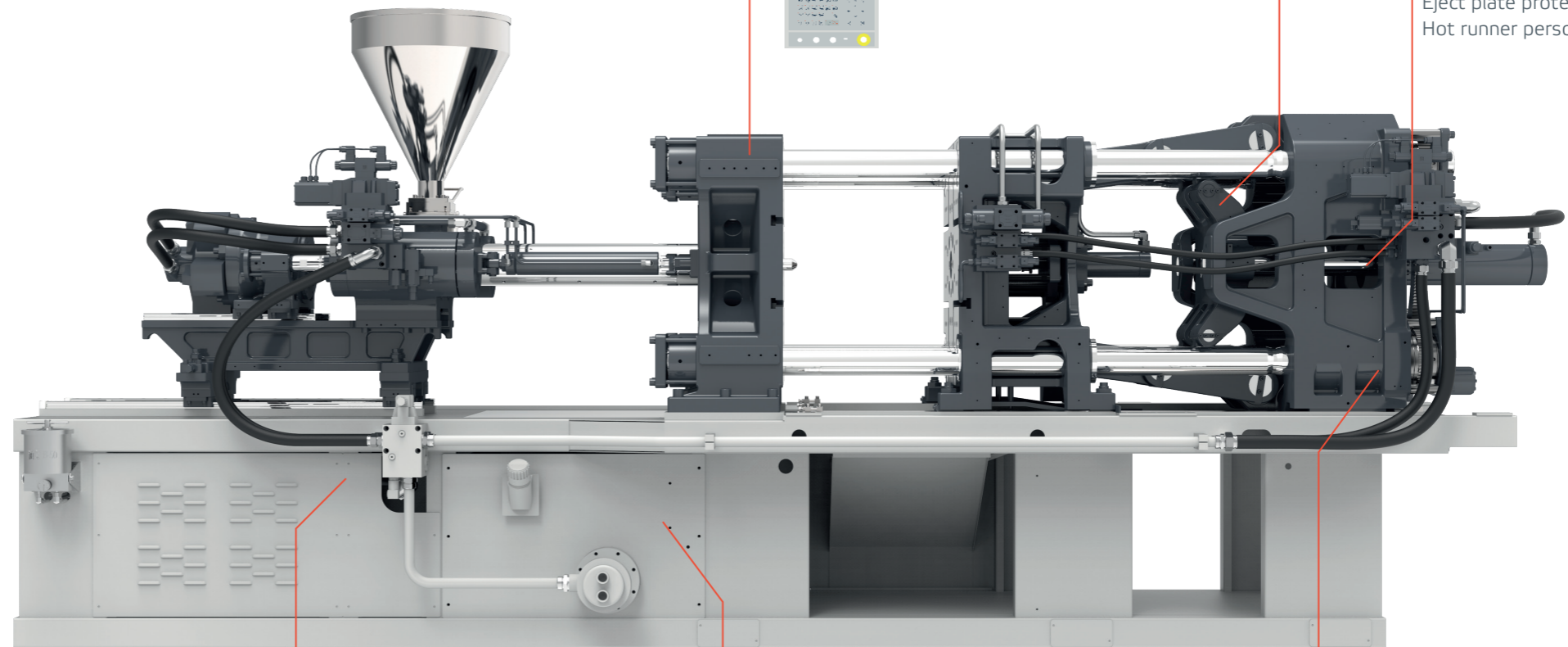
High plasticized screw
Effectively improve the plasticizing capacity .

NEO-T

Electrical & Hydraulic

Technical Advantages

- A new generation of servo power system saves 30% to 80% energy compared with traditional hydraulic systems
- Ultra-high response speed, the highest pressure can be reached in the fastest speed at 28ms, the system pressure is 17.5MPa
- Upgrade pump motor power to short the cycle time and widen the molding process
- Non-welded pipeline, cleaner hydraulic system
- More flexible and friendly used



Specialized controller

Equipped with advanced controller especially for injection molding machine. With one-button operation panel, faster scan time, more IO points and available for cloud service to provide the remote assistance and maintenance.



Non-welded pipeline, cleaner hydraulic system

Non-welded pipeline makes the oil clean and prevent the oil leakage. By pass oil filter + self-suction filter + non-welded pipeline + intergrated cylinder assembly improve the oil cleanliness.

More personalized settings

Clamping force monitoring.
Eject plate protection signal.
Hot runner personalization.

New generation of servo system

Faster response speed can not only continues running for 10min but also short the cycle time.



Professional electrical layout and brand components

Waterproof and dustproof electrical cabinet with world famous components. Separate strong and weak currenncy by total EMC thinking and humanized design to guarantee the reliable work precise control and convenience maintenance

Advanced hydraulic safety standard

Hydraulic safety with position detection.
Low pressure mold protection.
Hose protective chain.
Pressure relief function.

03

NEO·H

New high-end
two-platen
injection molding machine

NEO·H

New High-end Two-platen IMM

Tederic is deeply committed to the injection molding industry, backed by professional experience. The NEO·H series is a collection of innovative patented technologies with flexible and rich functional configurations to provide you with professional customized solutions.

Clamping force: 680t – 2700t

Stable, Precision, Efficient, Energy-saving

Main application sectors



Automotive



Home Appliances



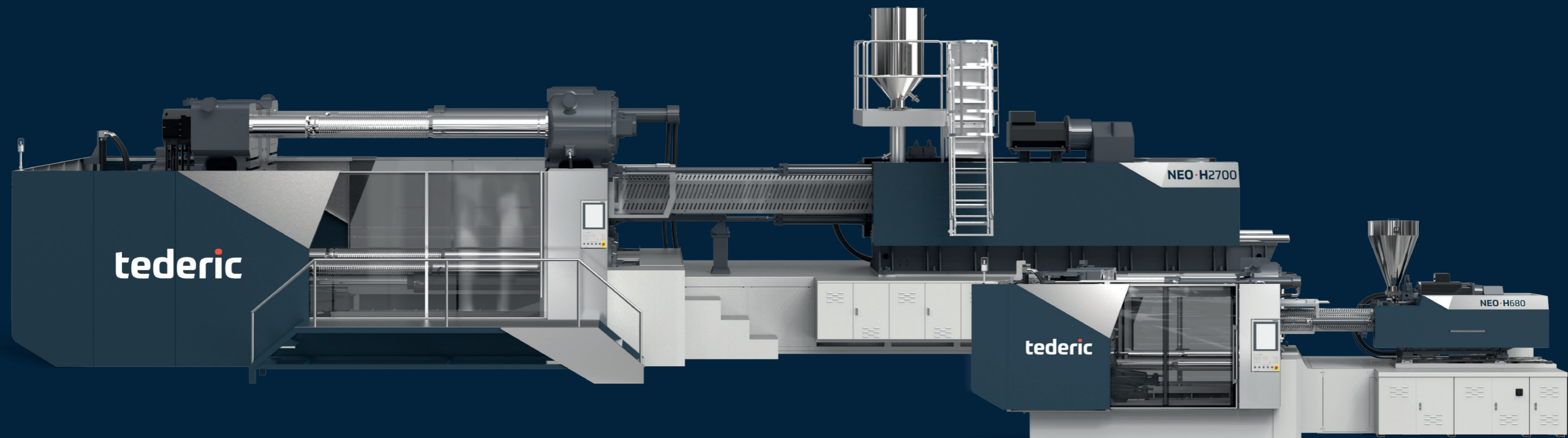
Logistics



Environmental Protection



Commodity



NEO·H

Clamping Unit

Technical Advantages

- Huge mold space, clamping stroke can be expanded
- Mould open position repeat accuracy $\leq 1\text{mm}$
- Modular design of mold opening cylinder
- Increased mold support weight by 15%
- Tie-bar load eccentric $\leq 4\%$

Stable synchronous lock structure

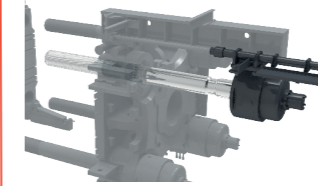
Lock cylinder with buffer unit.
Accurate alignment without impact,
stable tie bar position with even
force.

Huge mold space and opening stroke

Flexible for more molds.
The exclusive mold protection
function of the two-platen
machine is safe and reliable.

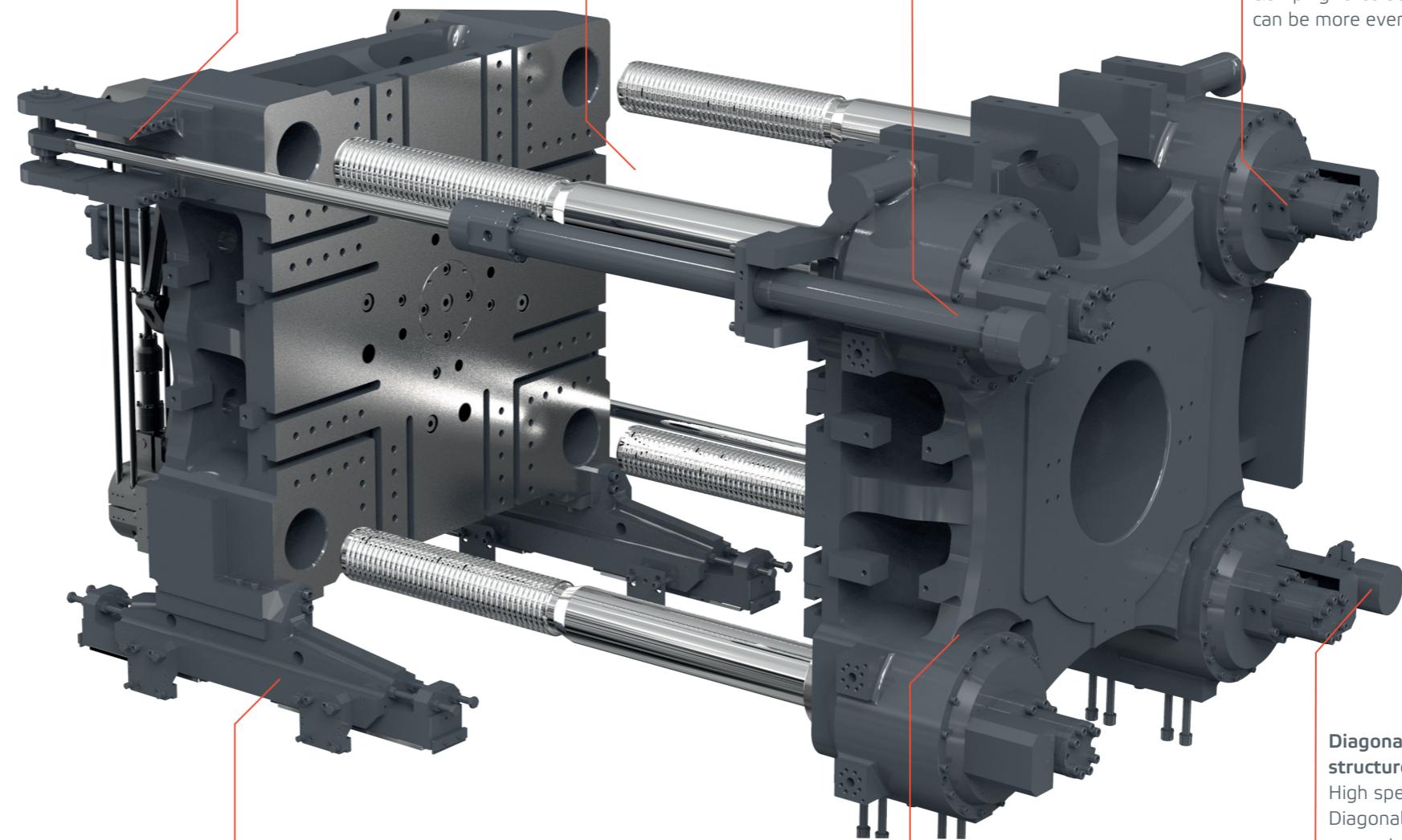
Pullsure™ technology (option)

Solves customer factory
height limits, improves
mold change efficiency.



Short stroke clamping cylinder

Boosting stroke can speed up
clamping force built, so mold force
can be more even.



Sliding foot oblique iron type support device

Can support heavier molds, mold
Support weight increased by 15%.

High repeatability

Mold opening and closing controller
by proportional valve, improve
mold opening position and repeat
the position accuracy, the repeat
accuracy is within $\pm 0.5\text{mm}$.

Diagonal parallel cylinder structure

High speed cylinder with
Diagonal parallel structure,
guarantees stable and fast
mold clamping & opening,
shortens dry cycle time.

NEO·H

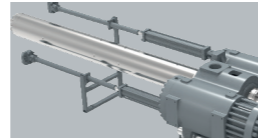
Injection Unit

Technical Advantages

- Injection repeat accuracy less than 0.3%
- Modular design
- Temperature control of barrel $\leq \pm 1^\circ\text{C}$

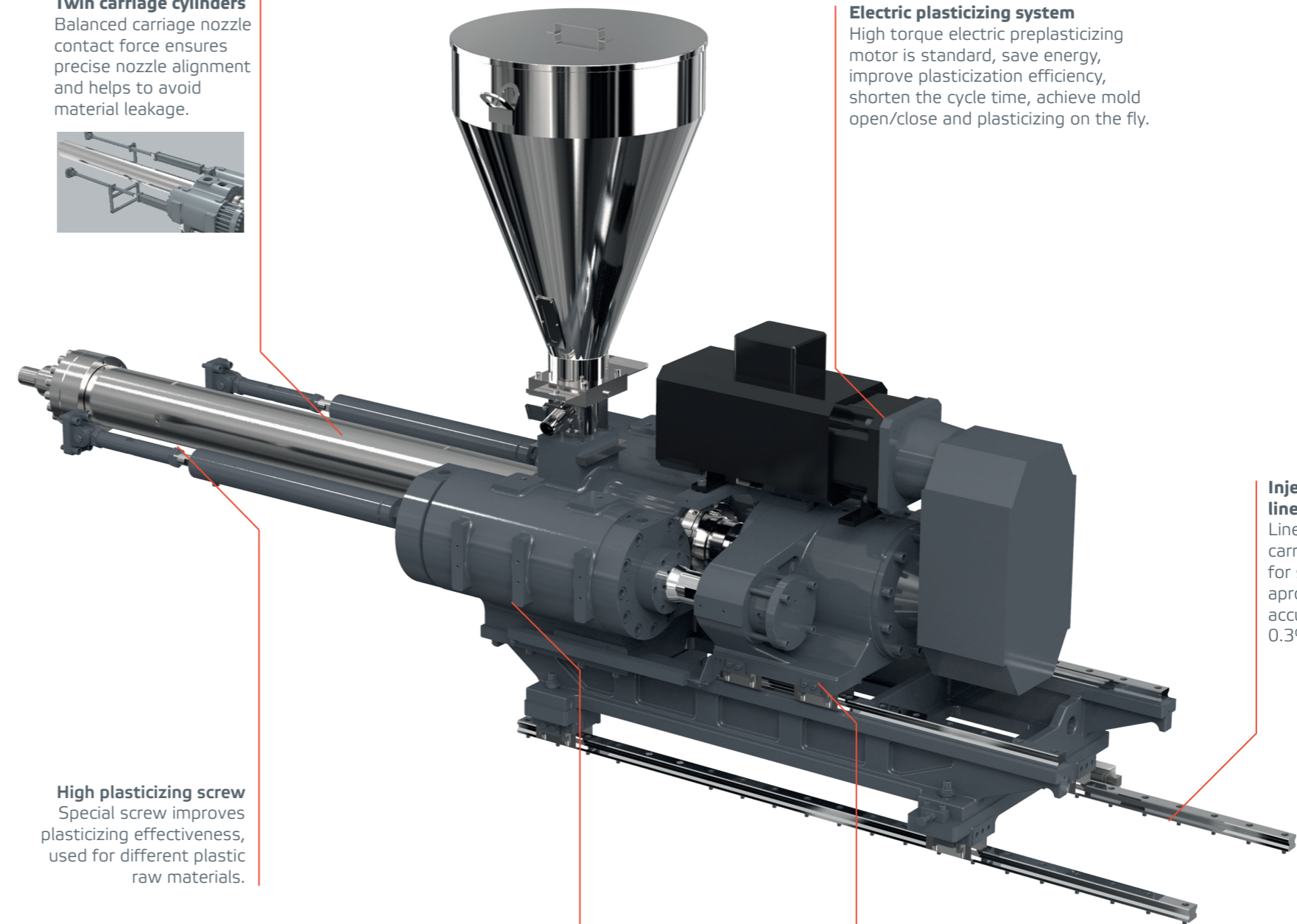
Twin carriage cylinders

Balanced carriage nozzle contact force ensures precise nozzle alignment and helps to avoid material leakage.



Electric plasticizing system

High torque electric preplasticizing motor is standard, save energy, improve plasticization efficiency, shorten the cycle time, achieve mold open/close and plasticizing on the fly.



Injection double-layer linear rail structure

Linear guides on both carriage and injection for smooth movement aproduct repeat accuracy less than 0.3% .

High plasticizing screw

Special screw improves plasticizing effectiveness, used for different plastic raw materials.

Rotational injection unit

More easier to replace the screw and barrel .

Centralized lubrication device by manual pressure release for the carriage

Manual lubrication pump with pressure realese + detection type grease distributor, uniform layout and elegant.

NEO·H

Electrical & Hydraulic

Technical Advantages

- Standard KEBA high-performance control, powerful open software platform
- Mold open/close and plasticizing on the fly is std for all machine
- Increased oil pump motor power
- Functions customizable, more humane and flexible

Accurate control for mold opening & clamping
Using mold opening & clamping predict formula, shorten its time greatly. Combined with proportional direction valve guarantee stable mold opening & clamping.

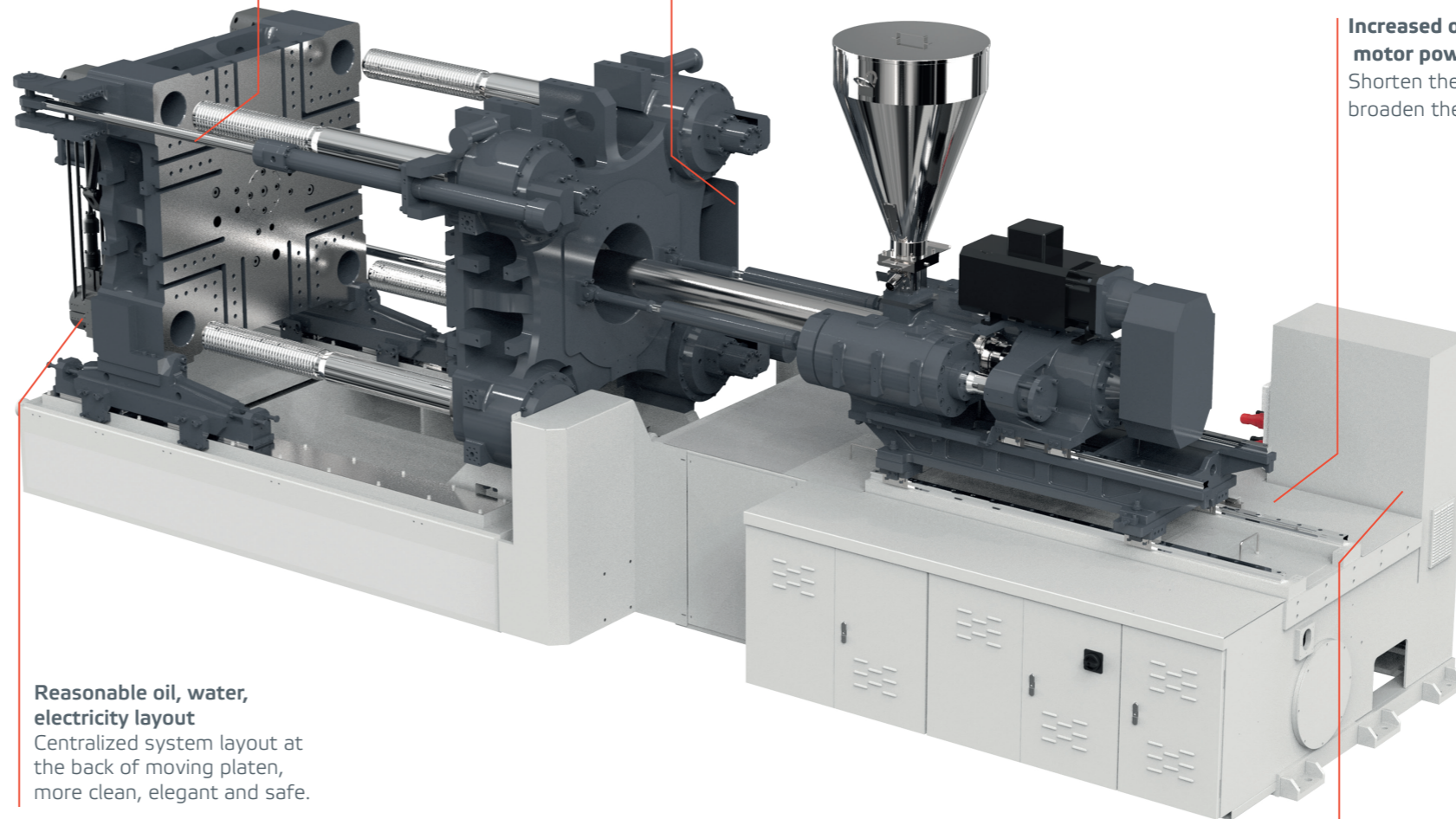
International standard control system
Standard 15-inch KEBA high-performance Control system based on Linux system; Protocols of OPC and Modbus are used for Industry 4.0 access; freely programmable, Convenient for secondary development and realize various functions. Larger size screen, more comfortable for operator.



Increased oil pump motor power
Shorten the cycle time and broaden the molding process.

Reasonable oil, water, electricity layout
Centralized system layout at the back of moving platen, more clean, elegant and safe.

Modular design of electric control cabinet
Independent electric cabinet is designed based on high and low voltage, safer and more reliable.



04

NEO·E

New high-end
electric
injection molding machine

NEO·E

New High-end Electric IMM

With the brand concept of extreme purity, pioneer and high performance, and excellent technological innovation. NEO-E has superb electric technology and rich application experience.

NEO·E Full-Electric IMM Clamping force: 55t- 460t

NEO·Ec Hybrid IMM Clamping force: 168t - 1088t

Precision, Efficient, Energy-saving, Clean

Main application sectors



Automotive



Electronic



Medical



Packaging



NEO·E

Clamping Unit

Technical Advantages

- Precision controlled by servo motor, repetitive positioning accuracy of mold opening position is up to 0.01mm
- No lubrication of tie bar, optimizing the cleanliness of the clamping unit
- Huge mold capacity to achieve cross-level benchmarking of parameters
- High standard manufacturing requirements, template parallelism is controlled within 0.15mm/m

Toggle structure with 5 point

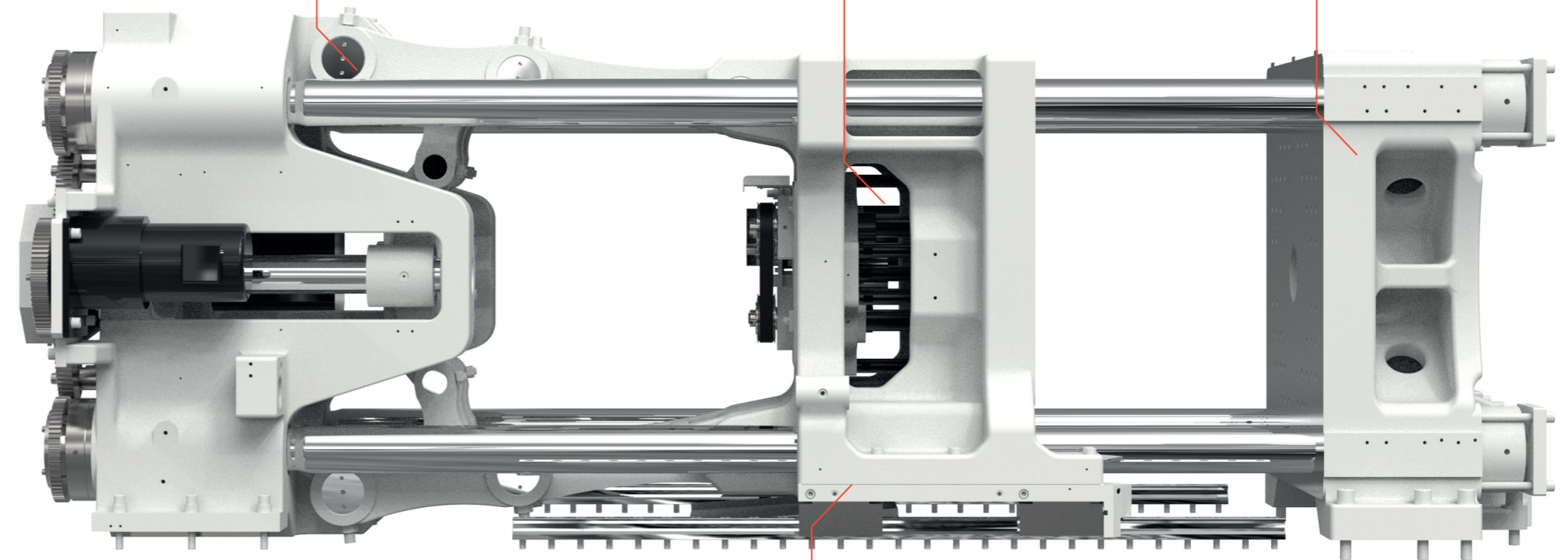
The strengthened platen and the stabilized toggle structure are respectively designed by professional mechanics analysis and professional motion analysis. The central pressing effect of the V-shaped toggle mechanism makes the clamping force evenly transmitted to the mold. Reduce the excess clamping force and protect the life of the mold.

Ejector pin motor with brake

The ejector pin will not retreat even when the door is opened or the power is cut off, ensuring the safety of the operator.

High-strength platen material combined with ultra-high rigid platen structure

The platen strength is increased by 33%, and the hardness is increased by 18%. Reduce mold deformation, increase mold service life, and improve product consistency.



Linear guide structure is used for moving platen

Improve the load-bearing capacity of the mold; improve the parallelism and positioning accuracy of the platen; reduce energy consumption; optimize the cleanliness of the clamping unit.

NEO·E

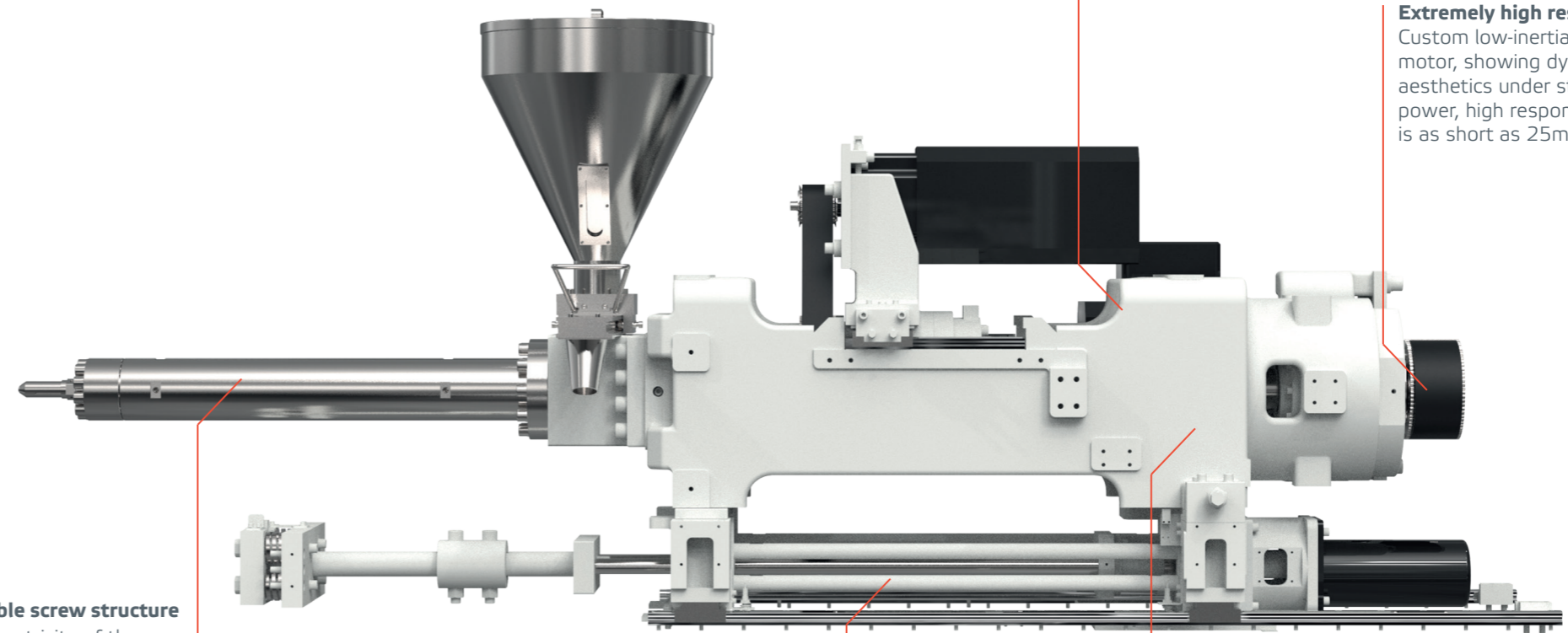
Injection Unit

Technical Advantages

- Pressure control accuracy is up to ± 1 bar, which can achieve 0.1% repeated precision of product quality
- Multiple injection speeds are available, up to 500mm/s
- Excellent low-speed characteristics, smooth injection below 1mm/s
- The screw runout is controlled within 0.05mm, and the optical special equipment can reach 0.03mm

Adjustable screw structure

The concentricity of the screw is guaranteed, and the production effect of optical-grade products can be easily realized. The hard alloy steel screw can improve the applicability of the screw and increase the life of the screw.



Top quality and durable

A full set of NSK transmission components, trade the best quality for the longest service life.

Extremely high response

Custom low-inertia servo motor, showing dynamic aesthetics under strong power, high response time is as short as 25ms.

Integrated injection base

The minimalist design eliminates accumulated errors in assembly and improves injection stability.

Double track structure

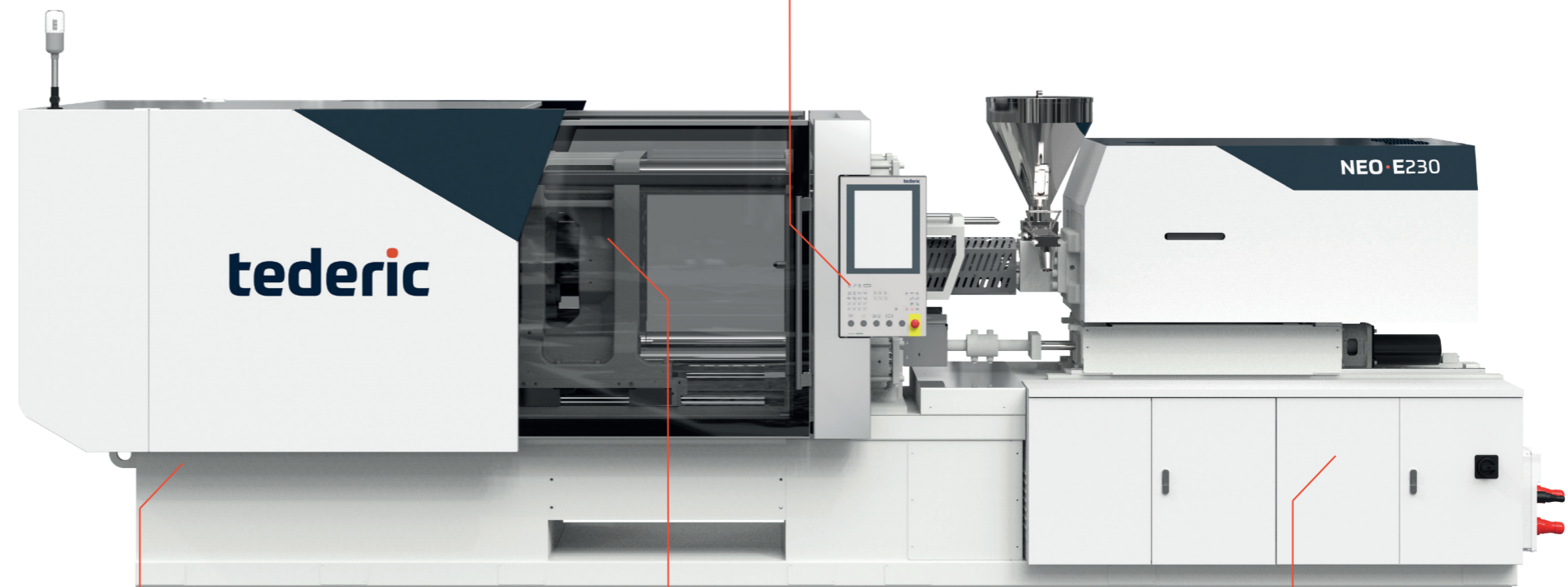
The injection starts quickly, runs smoothly, and has precise positioning.

NEO·E

Electrical

Technical Advantages

- Dry cycle shortened by more than 10%
- Breakpoint self-protection function
- Low pressure mold protect full monitoring



Full motor professional control

The control system is fully upgraded, equipped with a 15-inch touch screen, which enhances the human-computer interaction experience.

Machine base structure

Machine base positioning design, modular assembly, automatic welding.

Mold ejector pins return confirmation interface

It is absolutely safe to protect the mold.

Modular electric control cabinet design

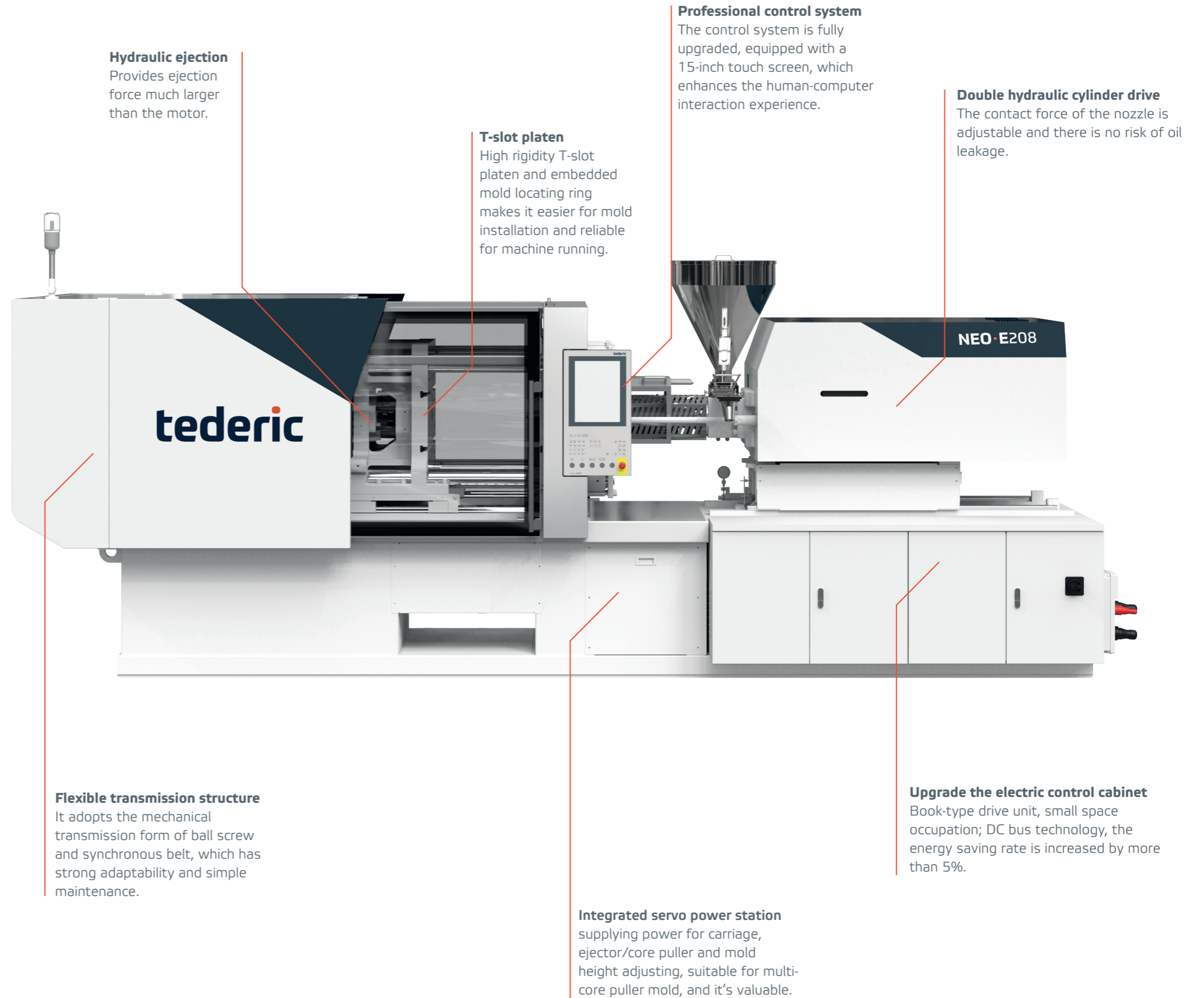
The electrical control cabinet adopts EMC design to prevent interference, the system is safe and reliable, and the maintenance is convenient.

NEO·Ec

New high-end hybrid IMM

Technical Advantages

- Electric technology is used for injection, charge, and switch molds
- Open-close mold position repeated accuracy is up to 0.01mm
- Integrated servo-hydraulic power station to adapt to diversified mold needs
- The moving platen is guided by linear guides, with high accuracy, low energy consumption, and no pollution in the clamping unit.
- DC bus technology, energy-saving effect is prominent



05

NEO·M

New high-end
multi-component
injection molding machine

NEO·M

New High-end Multi-component IMM

NEO·M has industry-leading multi-color injection molding technology, flexible modularization, professional customized design, to meet your diverse process needs. Tederic continues to innovate and explore the possibilities of injection molding.

NEO·Ms Opposite injection IMM with horizontal rotary turntable
Clamping force: 880t – 1920t

NEO·Mv Multi-component IMM with vertical rotary turntable
Clamping force: 170t – 1920t

Stable, Precise, Professional, Flexible

Main application sectors



Automotive



Home Appliances



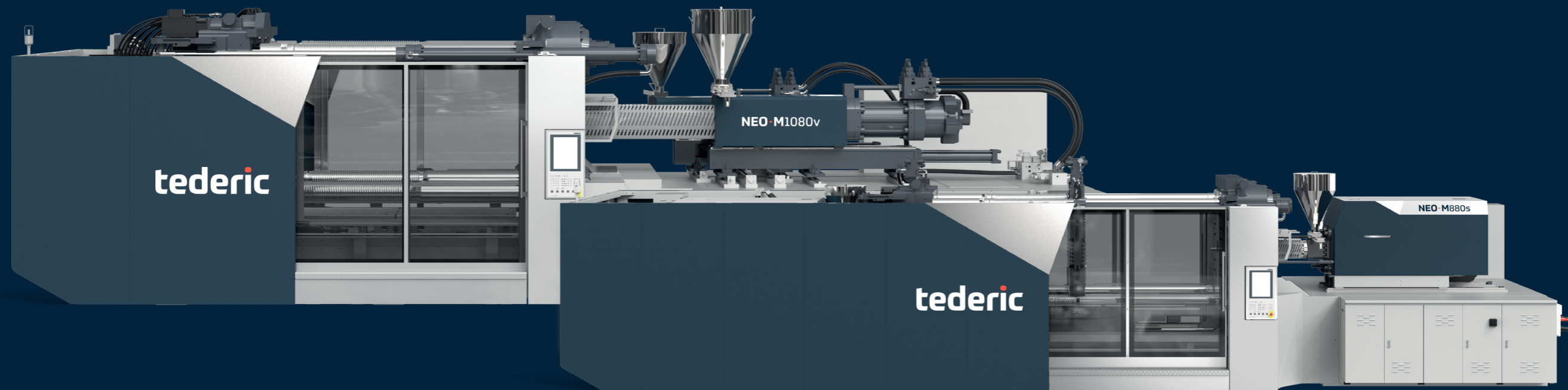
Logistics



Environment Protection



Electronic



NEO·Ms

Opposite injection IMM with horizontal rotary turntable

Technical Advantages

- Combined by two-platen clamping unit and opposite injection unit, ensures the molding of complicated dual-color products with smaller space
- The medium platen can bear more mold weight up to 50t.
- Ensures the weight precision $\leq 0.3\%$
- The max. positional repeatability of mold opening and the medium platen ≤ 1 mm
- Flexible customized services, professional solution aiming at customer's product characteristics

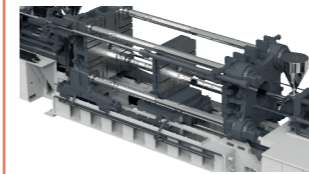
Opposite arranged two injection units
Two opposite single-cylinder precise injection units or high-speed full electric injection unit can be equipped at the same time to meet the requirements of more products characteristics. In addition, opposite injection unit moves synchronously with the moving platen, more efficient is achieved.

Exclusive Spinsure™-H horizontal rotary platen

Heavy-duty linear guide for the medium platen: supports heavier molds, lower friction resistance, and runs more smoothly.

The speed reducer and servo motor drive for the rotation of the medium platen: it can rotate larger and heavier molds, adapt to more special two-color auto parts molds, servo control is more accurate, and energy saving.

The medium platen movement is controlled by proportional valve to improve the accuracy of mold opening end position and repeated position.

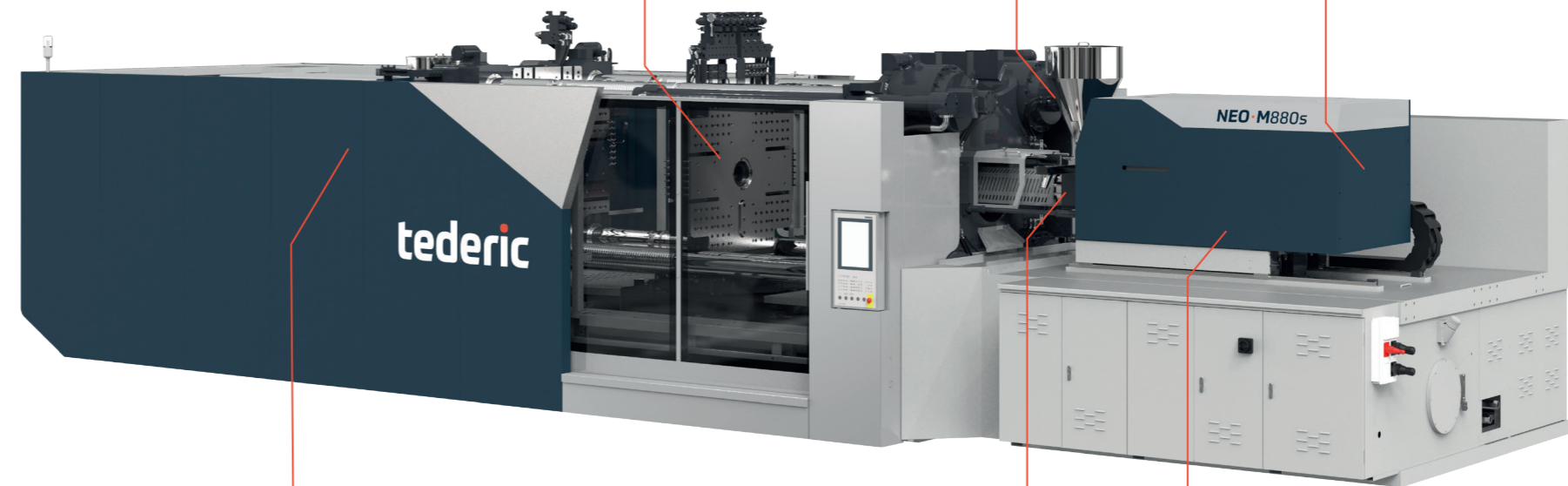


Built-in high pressure mold clamping cylinder

Forming clamping force quickly and spreading stress on mold evenly.

Sub-injection unit can be matched

It can be equipped with Multimold™ multi-color technology to realize the function derivation of the machine.



Centralized lubrication device by manual pressure release for the carriage

Manual lubrication pump with pressure release + detection type grease distributor, uniform layout and elegant.

Modular selection of injection unit

Electric injection unit: The repeat positioning accuracy of the injection position is up to 0.01mm.

Single-cylinder one-line injection unit: low injection resistance, low inertia and quick injection response.

Parallel injection unit: More stable injection, good sealing.

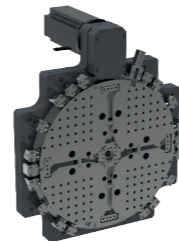
NEO·Mv

Multi-component IMM with vertical rotary turntable

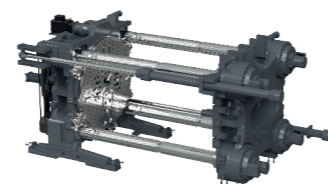
Technical Advantages

- Maximum dia. 2250mm rotary table
- Static pressure supporting device for the rotary table, maximum mold weight up to 30t
- Large mold space, applies to the large auto parts molds and larger multi-component products
- It can satisfy the production demands for multi-color and multi-component, achieve mixed color, multi-color, sandwich, multi-layer plastic injection forms
- Modular design and flexible structures realize maximum 6 injection units running simultaneously, and achieve more possibilities

Independent Spinsure-V vertical rotary platen
Vertical mold rotary platen can be an independent control unit, achieving modular design. Easy to install, maintain, and upgrade customer's existed equipment.



Static pressure support device for rotary platen
Vertical rotary platen adopts static pressure support and claws to ensure the load capacity of the mold, which can realize heavier mold adaptation and ensure stable running of rotary platen.



Parallel injection units with adjustable spacing

The two sets injection units adopt single-cylinder, one-line injection structure, features precise and efficient running. The space between the injection units is adjustable, which can adapt to various molds with different sprue distance. The injection unit can be moved horizontally, and used as single color machine.

