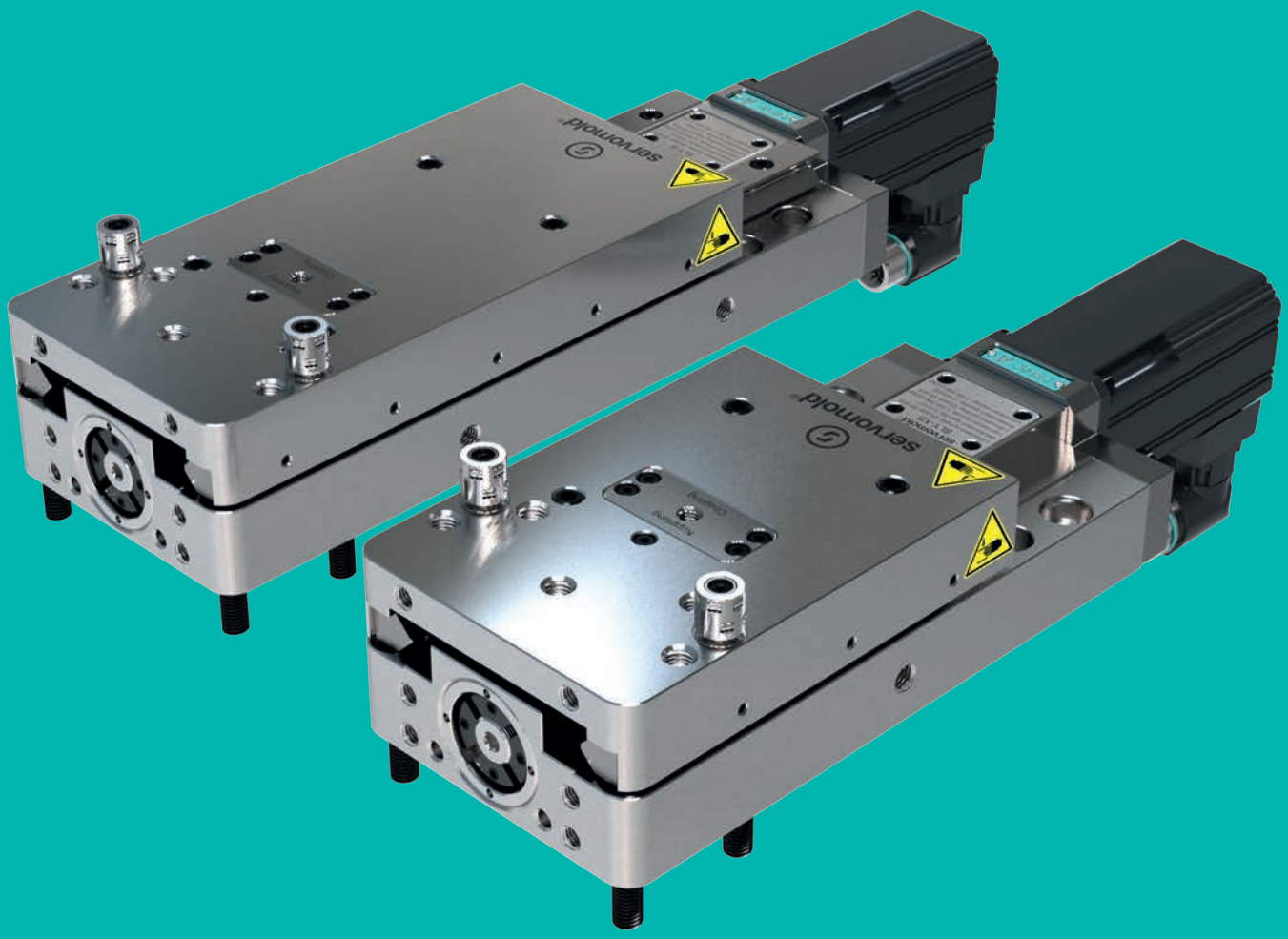
servomold®



Core Pulling Unit

SLY

µ precise and compact slider unit with durable ball screw spindle and high-performance servo motor

25 YEARS

Motion for creation

Servomold

Experienced partners and innovators supplying the medical & pharma manufacturing industry.

Over 25 years of experience
Demonstrating a proven track record in the industry.

Privatly owned
Flexibility in decision-making, fast responses to market changes, strong focus on long-term customer relationships.

Collaborative partnerships
Building long-term relationships with clients and partners for mutual growth and success.

Full commitment
To efficient, application-oriented solutions.

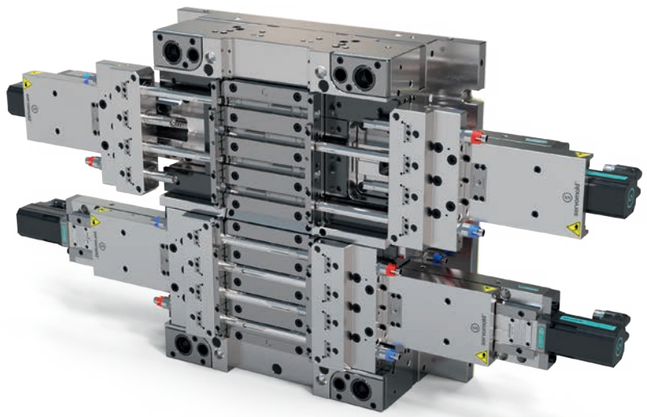
Bianca and Thomas Meister, Management

Applications

New tools and retrofit

The Core Pulling Unit (SLY), by Servomold is the perfect alternative to hydraulic cylinders, both for new molds and for retrofitting existing molds.

The application possibilities and areas of use are diverse and allow clean, precise and highly dynamic slider movement – ideal for clean room environments.

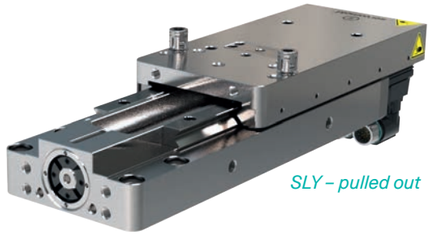


Process advantages

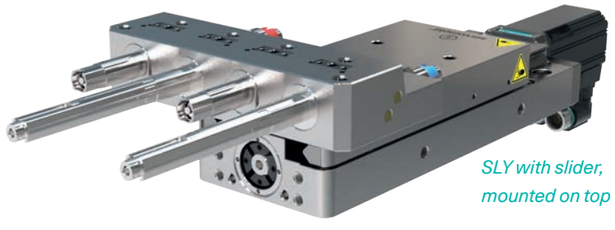
The core pulling unit is mounted on the injection mold tools and allows different sliders to be mounted on the carriage.

- Linear guideways with needle bearing allow the carriage to be guided extremely precisely and smoothly
- Cleanroom-compatible minimum lubrication
- Multi-stage movements allow individual design of the demolding process
- Optional motor brakes for vertical arrangement prevent sagging of the mechanics when switching off the power

SLY – closed



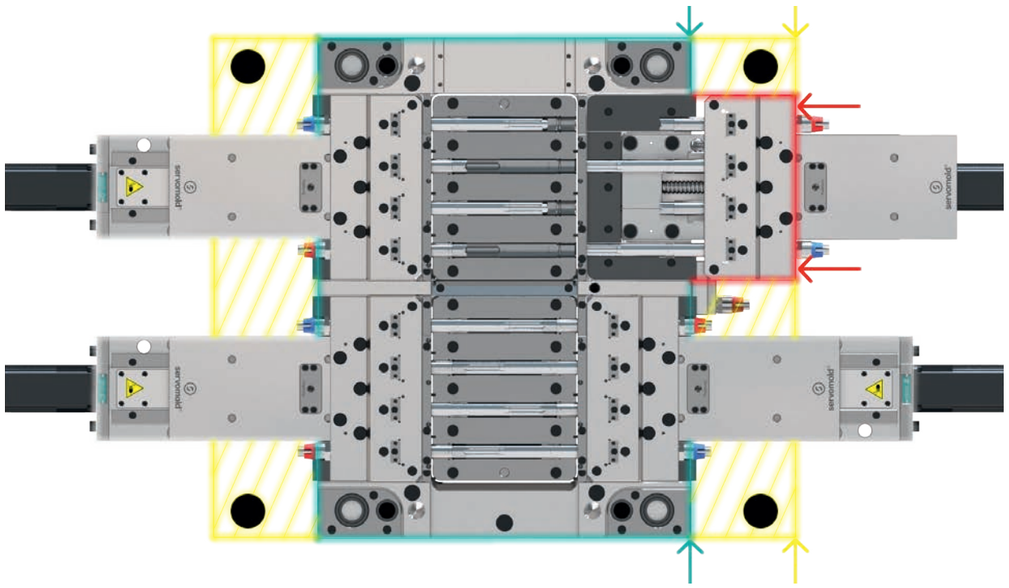
SLY – pulled out



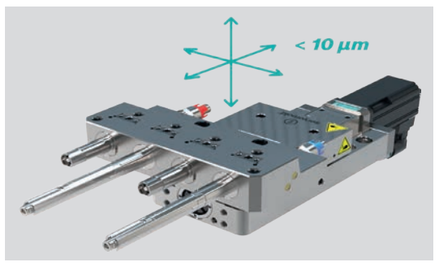
SLY with slider, mounted on top

Compact tool dimensions

Significantly more compact form sizes by moving the slide guide outside the mould frame.

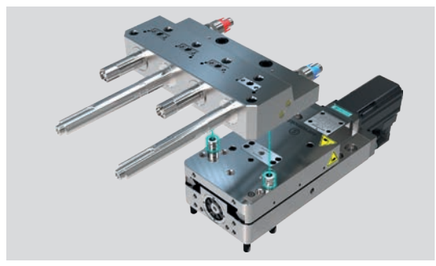


Extreme precision



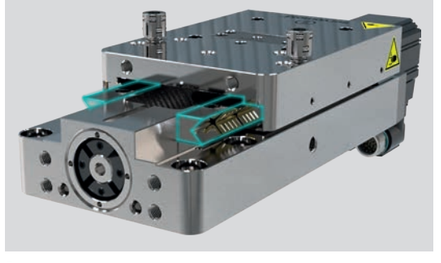
- Outstanding precision for assembly and positioning in all three axes.

Precise centring



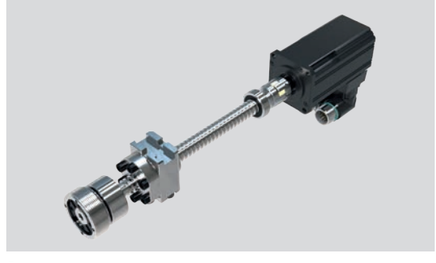
- Preloaded centring elements for µm-precise positioning of the slider bodies.

Precision guides



- Maximum load capacity, rigidity and accuracy thanks to low-maintenance linear guides with cage guidance.

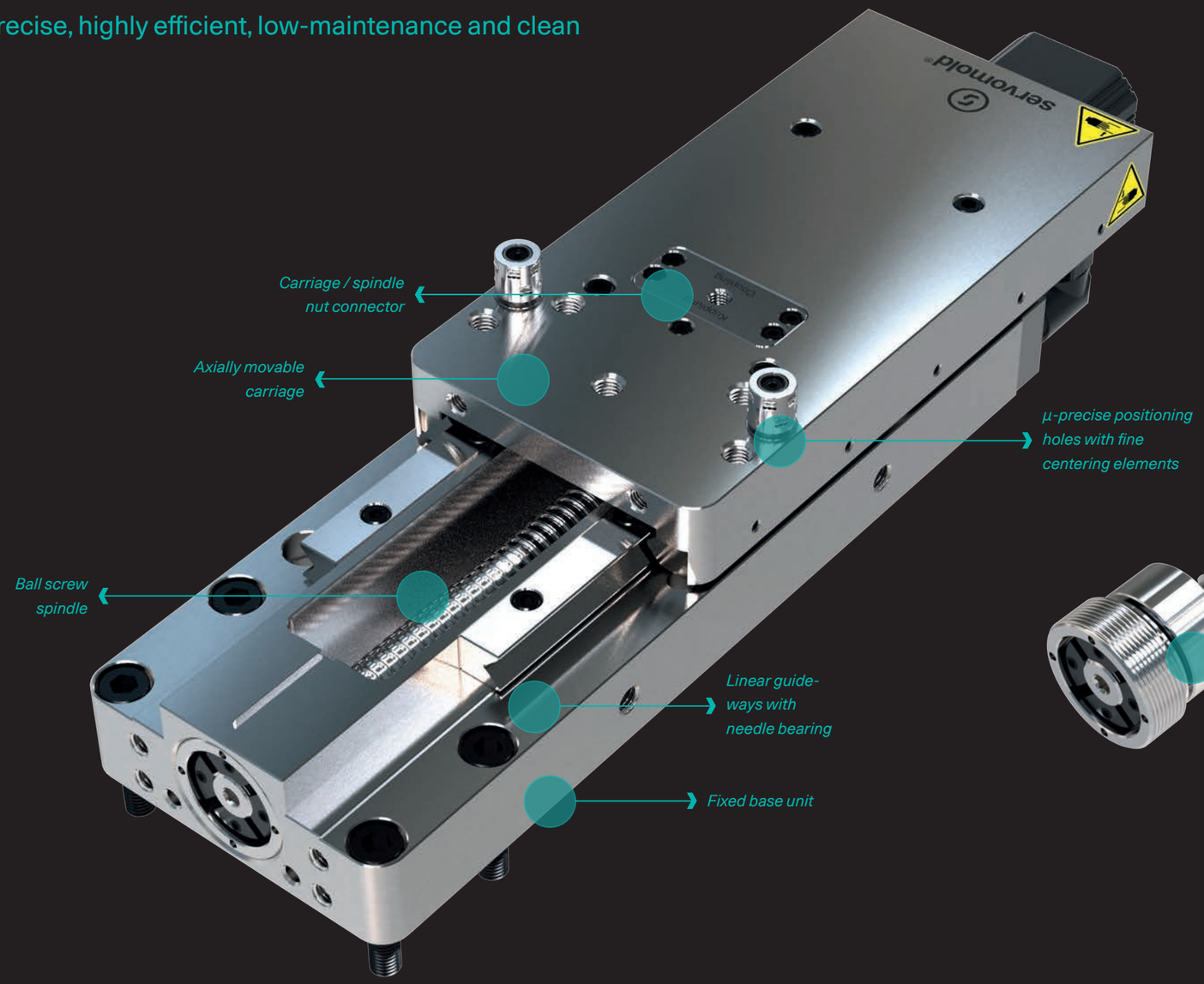
Servo-electric drive train



- Servo-electric drive train with special ball screw spindle for clean and efficient operation.

Product highlights SLY

Precise, highly efficient, low-maintenance and clean

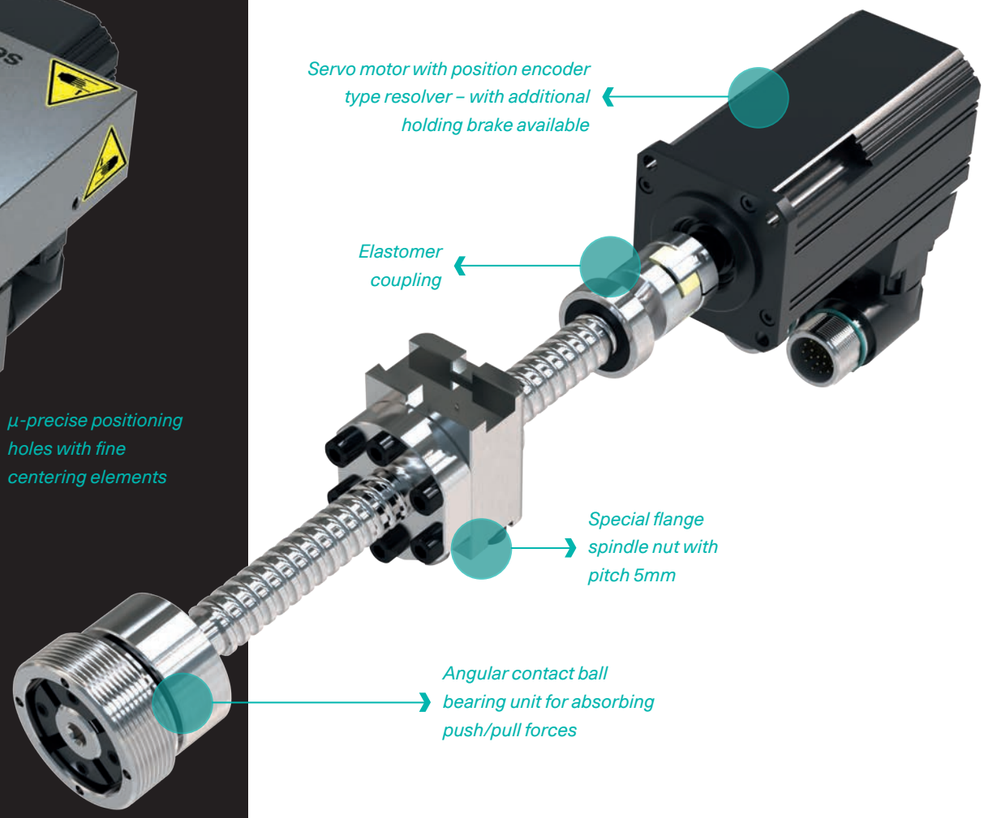


Feature set

- Compact, clean and highly dynamic alternative to hydraulic cylinders – especially for slide movements and clean room environments
- Continuously high forces and speeds possible up to 12 kN force and 600mm / sec velocity (150 mm in 0.5 sec – including acceleration and deceleration)
- Attached, replaceable high-performance servo motor
- Easy maintenance access to spindle nut
- µ precise assembly and movements

SLY

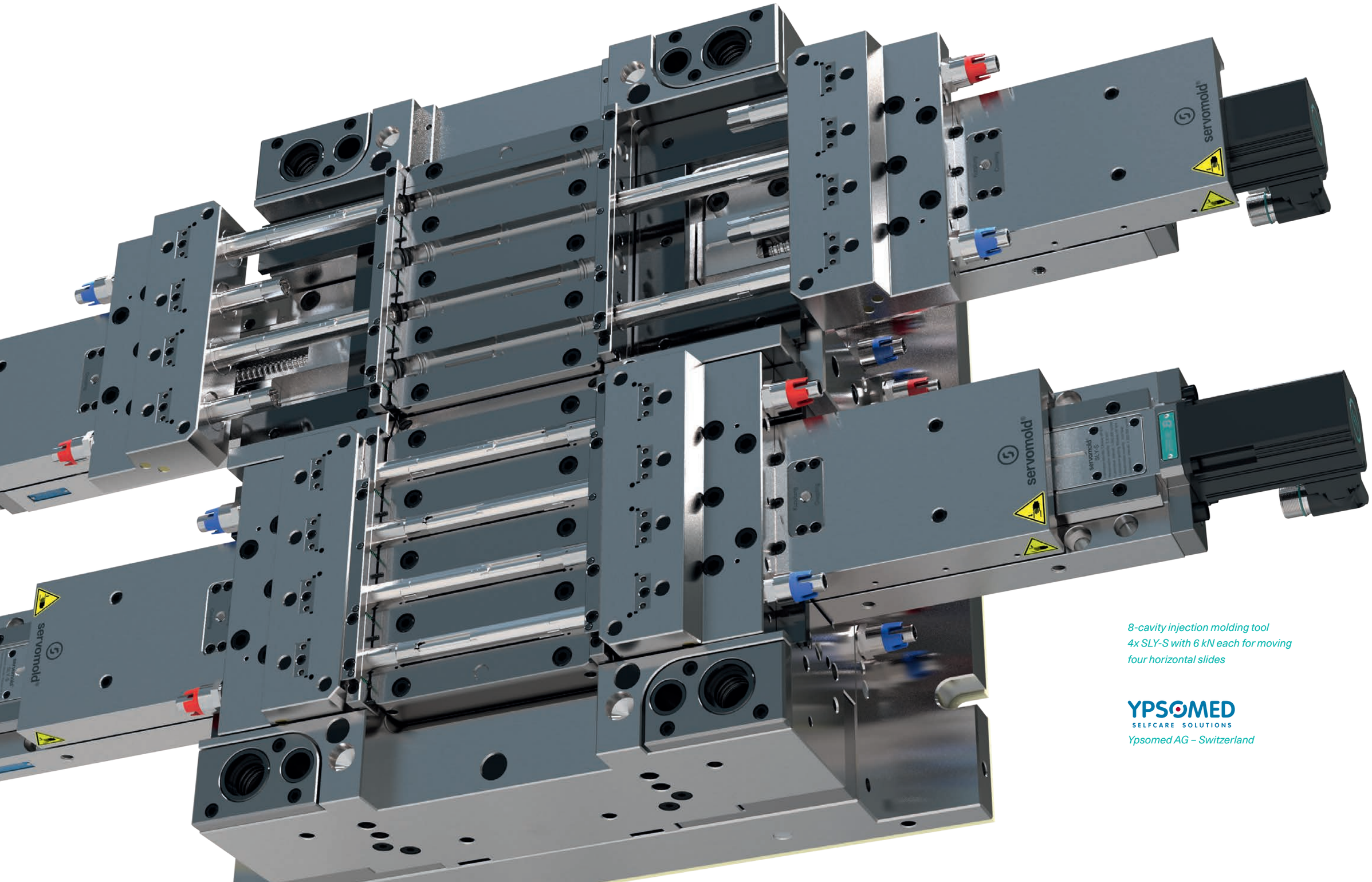
The SLY core pulling unit is supplied fully assembled and tested by Servomold. The µ precise positioning holes enable extremely precise assembly of the core pulling unit and the slider.



Servo MoldControl

The MoldControl units including touch panel offer an innovative operating concept with which all important parameters and functions are displayed clearly and quickly accessible.

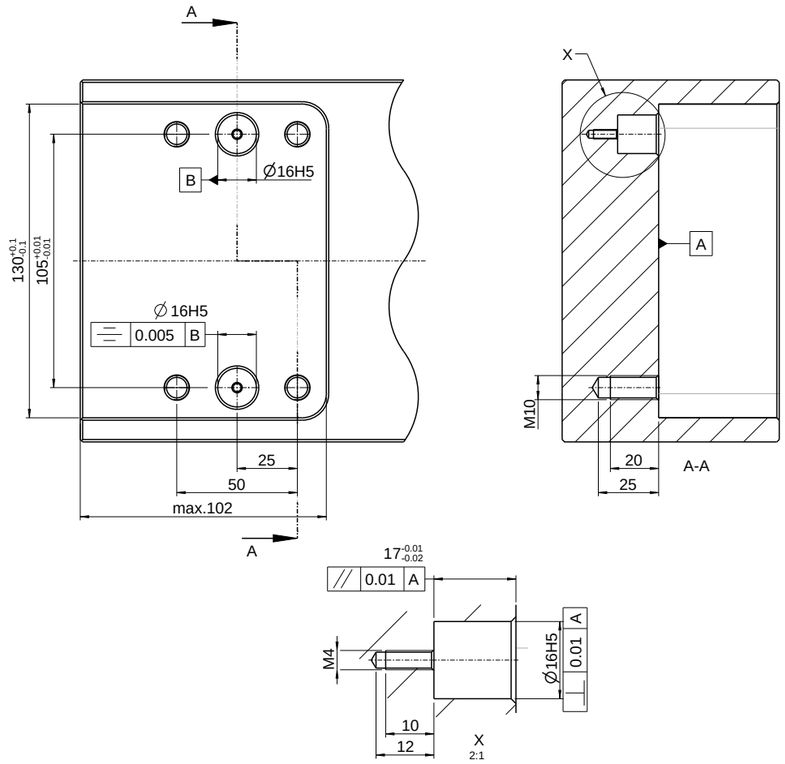
References

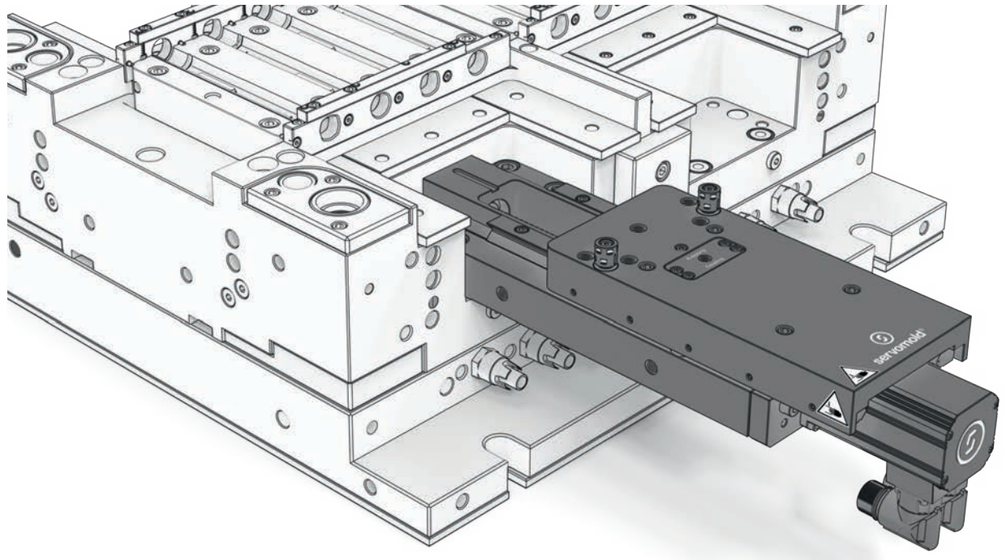


8-cavity injection molding tool
4x SLY-S with 6 kN each for moving
four horizontal slides

YPSOMED
SELFCARE SOLUTIONS
Ypsomed AG – Switzerland

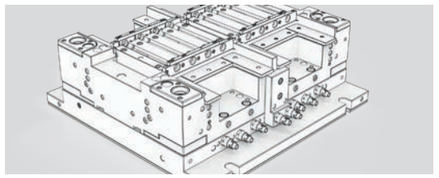
Installation situation





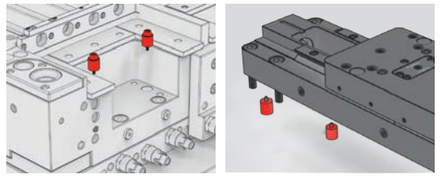
Assembly

1. Preparations



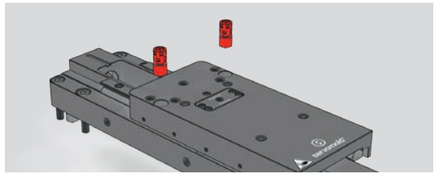
- In all cases, maintain clean fine centering surfaces and contact surfaces to ensure proper functionality.

2. Mounting the Tool Centering Mechanism



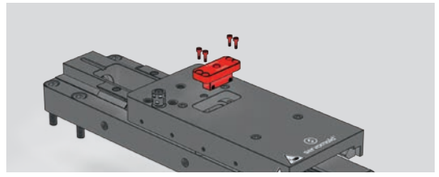
- Top and bottom may only be installed in pairs
- Use M4 screws (grade 12.9) with a tightening torque of 5 Nm.

3. Mounting the Tool Centering Mechanism



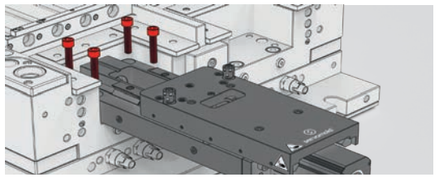
- Use M4 screws (grade 8.8) with a tightening torque of 3 Nm.

4. Removing the Coupling and Retracting the Slide



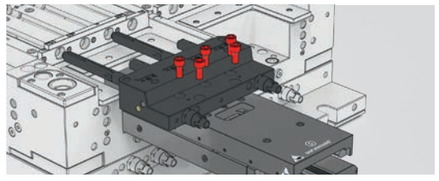
- For disassembly, screw in an M8 bolt and pull the coupling.

5. Installing the Core Pull Unit onto the Tool



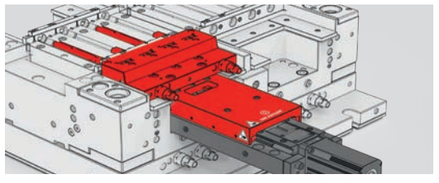
- Use M10 screws (grade 12.9) with a tightening torque of 60 Nm.

6. Installing the Slide



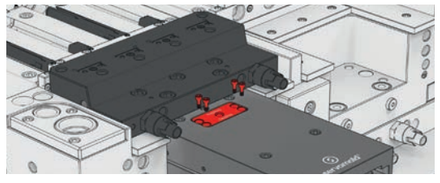
- Use M10 screws (grade 12.9) with a tightening torque of 60 Nm.

7. Checking Slide Operation and Moving to End Position



- To check the accuracy of fit, carefully move the slider to the end position.

8. Mounting the Coupling



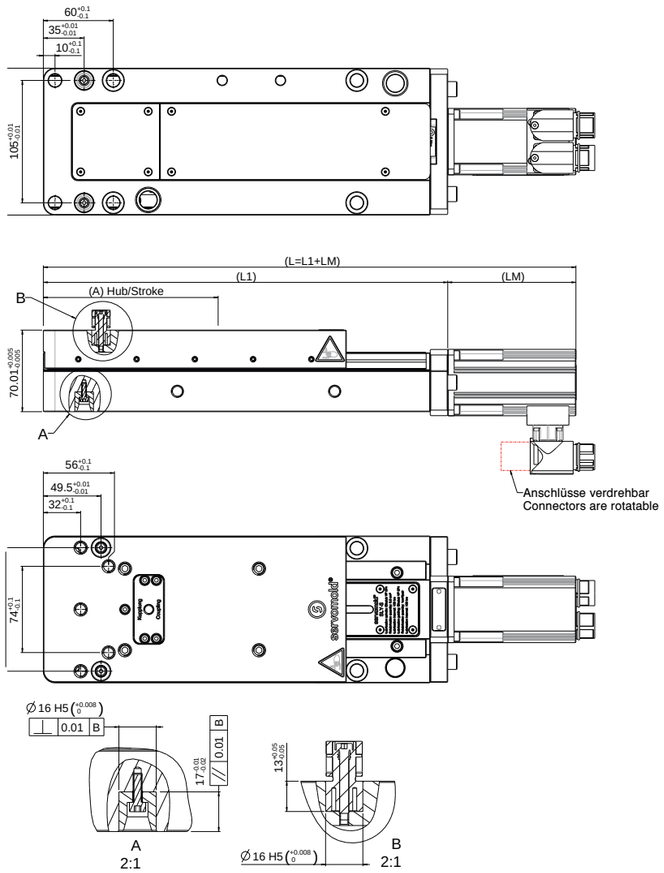
- Do not use force when mounting the coupling.
- The coupling should be mountable with minimal pressure.
- Use M4 screws (grade 12.9) with a tightening torque of 5 Nm.

SLY Variants

Core Pulling Unit – technical details

Type	SLY-S-75	SLY-S-Plus-75	SLY-S-100	SLY-S-Plus-100	SLY-S-150	SLY-S-Plus-150
Stroke (A) [mm]	75	75	100	100	150	150
Thrust max./nominal [kN]	6,8/1	12/3	6,8/1	12/3	6,8/1	12/3
(L1) ± 0.1 [mm]	270	270	298	298	347	347
Speed [mm/sec]	600	500	600	500	600	500
Weight ± 0.2 [kg]	14	14	15	15	17	17

Motor type	Resolver	Resolver + Brake	Absolute encoder	Absolute encoder + Brake
Engine length [mm]	126	149	143	188



Position encoder systems

The core pulling units are available with two different types of position encoder systems.

Resolver:
The more robust, more compact and cost-effective system but, after switching on the control unit, the home position must always be determined first by a homing operation.

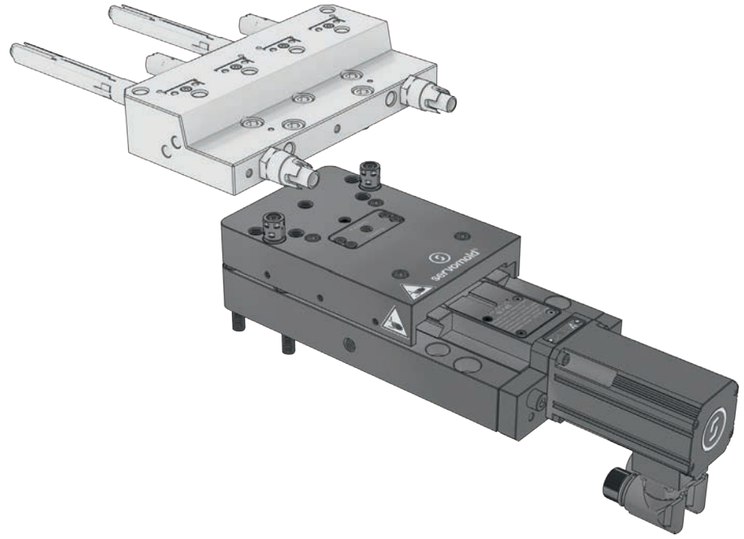
Absolute encoder:
The more expensive and mechanically more sensitive system, but the motor maintains the exact position even after the control unit is switched off. Once the system has been homed, it can be used immediately after switching on, without the need for further homing.

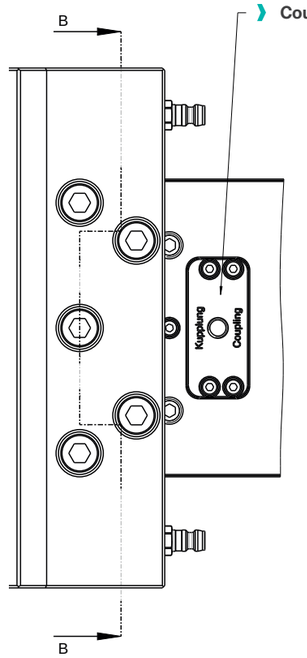
Brake

The motor brake is intended only as a holding brake and prevents vertical axes from sagging.

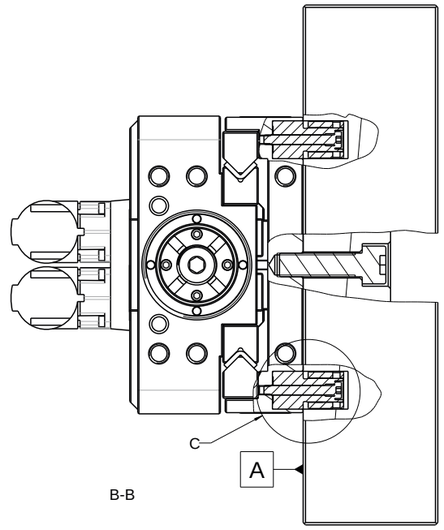
The stopping of the movement is achieved by the electrical energization of the motor (regulated counter-torque).

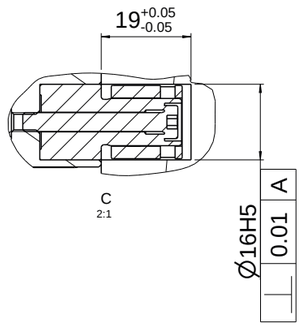
Illustration of slider and core pulling unit





Coupling must be removable





Important

- The slider width (B) must not exceed 250 mm.
- The slider weight must not exceed 14 kg.
- The slider body should be designed as compactly as possbile.
- The coupling must be removable and must not be covered by the slider body.
- The unit must not be disassembled or reworked!

WILD & KÜPFER

» At our state-of-the-art facility in Schmerikon, we continuously invest in cutting-edge technology and top performance – that's why we were early adopters and have relied on Servomold technology since then. «

Daniel Wild, CTO
Wild & Küpfer, Schmerikon – Switzerland

IGS GeboJagema

» Our strong focus on injection mould tools for the medical industry requires the use of clean and sustainable technologies, such as those made possible by servo systems. With Servomold as a partner, we are consciously relying on an ownermanaged company with clear focus, strong team spirit and the courage to innovate. This matches the core DNA of IGS GeboJagema. «

Rob Doorakkers, CIO
IGS GeboJagema – Netherlands

BRAUN®

» We are committed to helping our customers increase their production efficiency and implement more sustainable production processes. That is why we have strategically relied on Servomold system components and control units in more than 25 projects since 2014. «

ppa. Volker Dreher, Head of Process Technology
Braunform – Bahlingen

Aptar pharma

» With Servomold system components, we realize durable, low-maintenance and highly efficient moulds. In addition, the professional support of a highly motivated team for us the main reasons for the long-standing, cooperative partnership. «

Volker Kiene, Teamlead Project Management Industrialization Moulds
Aptar – Radolfzell

FRESENIUS KABI

» The key factors for us are the ease of operation, safety and the individual adaptability of Servomold control units to our processes. With its unique technology and extensive support, Servomold offers the best concept currently available for the use of servo motors in injection mould tools. «

Thomas Rübsam, Senior Director Technology, Plant Manager, Mihla Competence Center Injection Molding, Pharmaceuticals and Devices Division
Fresenius Kabi – Mihla

Röchling

» For us, Servomold is the de facto standard in the servo automation of injection mould tools. Maximum production reliability and performance, sophisticated technology and outstanding service speak for themselves. «

Christopher Heyd, Manager Tool Shop
Röchling Medical – Brensbach

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