COPY OF THE ORIGINAL

INSTRUCTION MANUAL

HYDRAULIC LONG-STROKE VISE

Typ SLX e-motion

Preliminary

worldwide • weltweit • worldwide

Date: 2023-09
Version: 1
Language: English

SMW AUTOBLOK

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INSTRUCTION MANUAL

Hydraulic long-stroke vise

Typ SLX e-motion

Thank you for purchasing an Original-SMW-AUTOBLOK Hydralic long-stroke vise type SLX e-motion.

This **instruction manual** contains the installation, the use and the maintenance instructions of the work holding „**SLX e-motion** ".

SMW-AUTOBLOK reserves the right to make **changes without notice**.

This **instruction manual is a part of the work holding** and must be passed to the new owner in case of sale.

This **instruction manual may not be** -in whole or in part- **copied** without our written agreement.

Please read the instruction manual carefully before installation and use and always follow the regulations.

Please note especially the sections which are marked with the following signs:

- **Danger of injury or danger to life if instructions are not followed.**
- **Danger of damage to the work holding, the machine or the components.**

Declaration of incorporation

for an incomplete machine
Machinery Directive 2006/42/EC, Annex II, B

The manufacturer:	SMW-AUTOBLOK Spannsysteme GmbH Wiesentalstrasse 28 88074 Meckenbeuren Deutschland / Germany

herby declares, that the following product:

Product description:	Hydralic long-stroke vise
Application range:	Installation in machine tool
Type:	SLX e-motion

is intended to be installed into a completed machine. It must not be put into service until the final machine into which the partly completed machinery it is to be incorporated has been declared in conformity with the provisions of the EU machine directive (2006/42/EC) Annex II, B.

Applied harmonized norms:

- DIN EN 1550 (2008)
- DIN ISO 13857 (2008)

The following basic requirements of Annex I, 2006/42/EC are complied with:

- No. 1, 1.1, 1.1.1, 1.1.2, 1.1.3
- No. 1.3.2, 1.3.3, 1.3.4, 1.3.7, 1.3.8
- No. 1.5, 1.6.1
- No. 1.7.1, 1.7.3, 1.7.4

The special technical documents have been created in accordance with Annex VII, Part B. These documents will be made available electronically on a reasoned request by the national authorities.

Responsible for documentation:	Schilling Rainer Chief designer
Place:	Meckenbeuren (Germany)
Date:	31.07.2023

Eckhard Maurer
President

General safety instructions


Danger!


Danger to the environment!


General precept sign!


Follow the instructions!


General warning sign!


Warning of risk of crushing!


Warning of hand injuries!


Warning of suspended load!

1. Correct use

SMW-AUTOBLOK clamping systems work safely and troublefree, if they are used according to their specification i.e. to clamp components (**only O.D. clamping**) on machine tools. Any other use can cause hazards.
For any damages resulting herefrom SMW-AUTOBLOK is not responsible.

2. Demands on operators

This SMW-AUTOBLOK product must be installed, operated and maintained only by qualified and regularly trained personnel.

3. Visual inspection

Please check the product for visible damage prior to use!

4. Transport

Please use suitable lifting gear for product heavier than 16 kg!

5. Safety precautions

- Maintenance and actuation must be carried out at stopped machine only.
- Maintenance and set up work must be carried out in safe areas only.
- During installing, connecting, adjusting, runoff and testing, it must be ensured, that no accidential actuation of the clamping unit can be carried out by the worker or any other persons.

6. Max. speed

The clamping unit is intended for stationary use only, and must not be used under rotation!

7. Danger of injury

- Danger of injury because of missing accessories.
- When actuating the clamping system there is increased chrushing hazzard due to the stroke of the moving components of the clamping system.
- Never reach for the clamping system while the spindle is rotating.
- Prior to working at the clamping system, make sure, that the machine cannot be started.
- Workpieces that are clamped with too low clamping force, can be ejected!
- Excessive clamping force can cause damage or breakage of teh individual components of teh cklamping system. Work pieces can be released.

8. Clamping force

The clamping force of the clamping system can vary, depending on its condition (lubrication and contamination).
The clamping forces have to verified in regular intervals. Use suitable staic grip force gages.

9. Maintenance

The stationary clamping system has to be maintained in regular intervals. Check the condition by measuring the grip force with a grip force gage. Maintenance must be carried out at stopped machine only.
Replace damaged parts with original SMW-AUTOBLOK spare parts only.
Maintenance must be carried out at stopped machine only! Insufficient and improper maintenace voids any warranty from SMW-AUTOBLOK.

11. Environment protection

Danger for environment when handling incorrect!
Incorrect handling of environment hazardous materials, especially the disposal, may result in environmental damage.

- Always follow below instructions.
- In case environmentally hazardous material polluted the environment always take suitable actions immediately. If in doubt, inform the local authority about the pollution.

The following hazardous materials are used: Lubricants such as oil and grease can contain poisonous agents. They must not pollute the environment. The disposal must be carried out by a suitable waste management company.
For a proper function of the work holding, use original SMW-AUTOBLOK lubricant only.

For any problems or questions please contact SMW-AUTOBLOK directly or one of our authorized offices.

ALL REGULATIONS ACCORDING TO THE PREVIOUS POINTS MSUT BE OBSERVED. THE USE ON MACHINE TOOLS HOWEVER, ALWAYS CAUSES SOME RESIDUAL RISKS, THAT HAVE TO BE ELIMINATED BY THE USER BY SUITABLE SAFETY ACTIONS.

SLX *e-motion*

Mechatronic long-stroke vise

- Monitoring of the jaw position / clamping force
- Mechanical maintenance of clamping force in case of power failure
- High-Low clamping

Application/customer benefits

- Mechatronic clamping drive with maintenance of clamping force due to self-locking, spring pack and engine brake
- High total clamping force* up to 40 kN for high cutting performance
- Extra long jaw stroke, 99 mm per jaw
- Monitoring of the clamping force and jaw position
- High-Low clamping possible
- Side / bottom connections for power and sensors

Technical features

- Total clamping force* max. 40 kN, Close / Open
- Jaw stroke 99 mm - repeatability ± 0.02 mm
- Self centering clamping (only O.D. clamping)
- Jaw width 160 mm
- Power supply 48 V / 10 A
- Communication interface Profinet
- 2 STO Signals
- **proofline® =** fully sealed - low maintenance

* Arithmetic total of all moving clamping

SLX *e-motion*

Self centering function via mechanical synchronisation

Monitoring of the clamping force and jaw position

Sealed jaw guideway

Extra long **jaw stroke**

Mechanical maintenance of clamping force in case of power failure

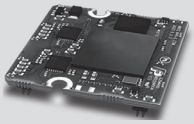
M23 hybrid plug
Power 48 V / 10 A
Profinet

LED for status

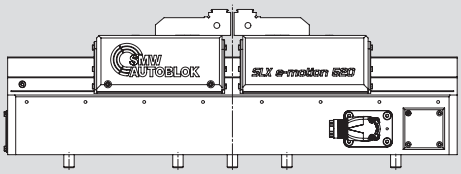
Plug & Play

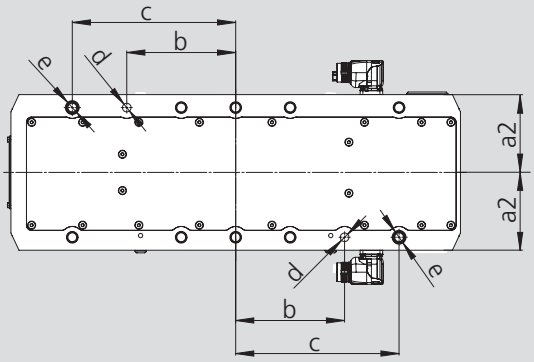
SLX e-*motion*

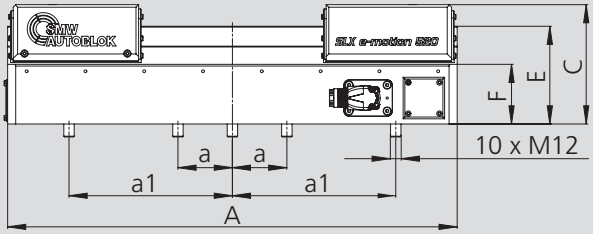
+

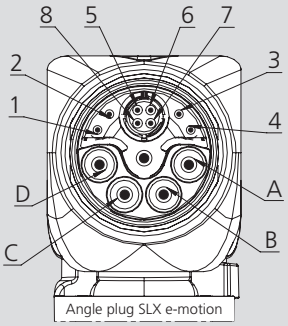


Integrated control

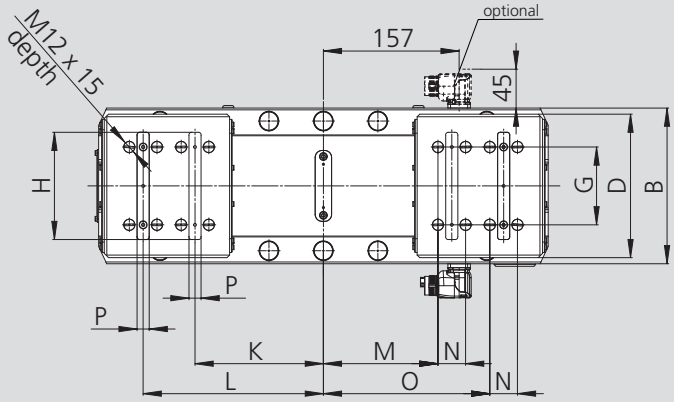








Angle plug SLX e-motion

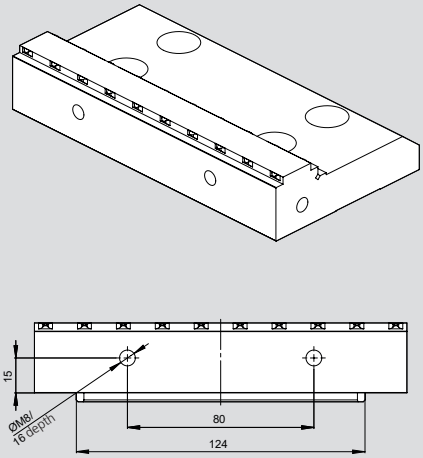


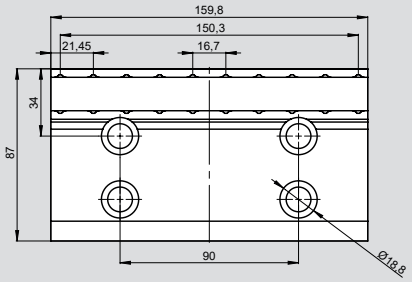
PIN assignment M23 hybrid plug			
PIN	**Core Color**	**Function**	**Description**
A	black 1	24 V	Logic Power
B	black 2	GND	Logic GND
C	black 3	48 V	Last Power
D	black 4	GND	Last GND
PE	green / yellow	Ground	Ground wire
1	violett	STO A	Safe hold A
2	brown	STO B	Safe hold B
3	green	STO GND	Safe hold GND
4	black 5	Nc	-
5	blue	Data RX-	ProfiNet
6	yellow	Data TX+	ProfiNet
7	white	Data RX+	ProfiNet
8	orange	Data TX-	ProfiNet

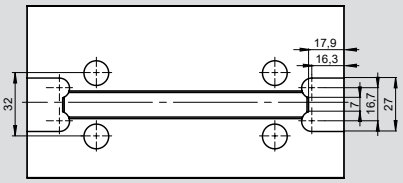
Subject to technical changes.
For more detailed information please ask our customer service.

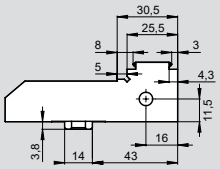
SMW-AUTOBLOK Type			**SLX *e-motion* 520**
Id.-No.			**461600**
Length	**A**	mm	520
	B	mm	180
	C	mm	138
Jaw width	**D**	mm	166
	E	mm	113
	F	mm	69
	G	mm	90
	H	mm	124
Min. / Max.	**K**	mm	49.5 / 148.5
Min. / Max.	**L**	mm	109.5 / 208.5
Min. / Max.	**M**	mm	33.5 / 132.5
	N	mm	32
Min. / Max.	**O**	mm	93.5 / 192.5
	P	mm	14 H^7 / 4 tief
	a / a1 / a2	mm	63 / 189 / 75
	b	mm	126 ±0.02
	c	mm	189 ±0.02
	d	mm	Ø10 H^7
	e	mm	Ø16 H^7
	-	mm	-
Max. clamping force		kN	40
Stroke per jaw		mm	99
Max. workpiece weight		kg	400
Mass		kg	70
Voltage		V	48
Power		A	10
Protection class		IP	67

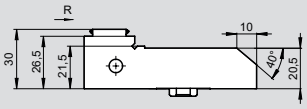
Hardened top jaw







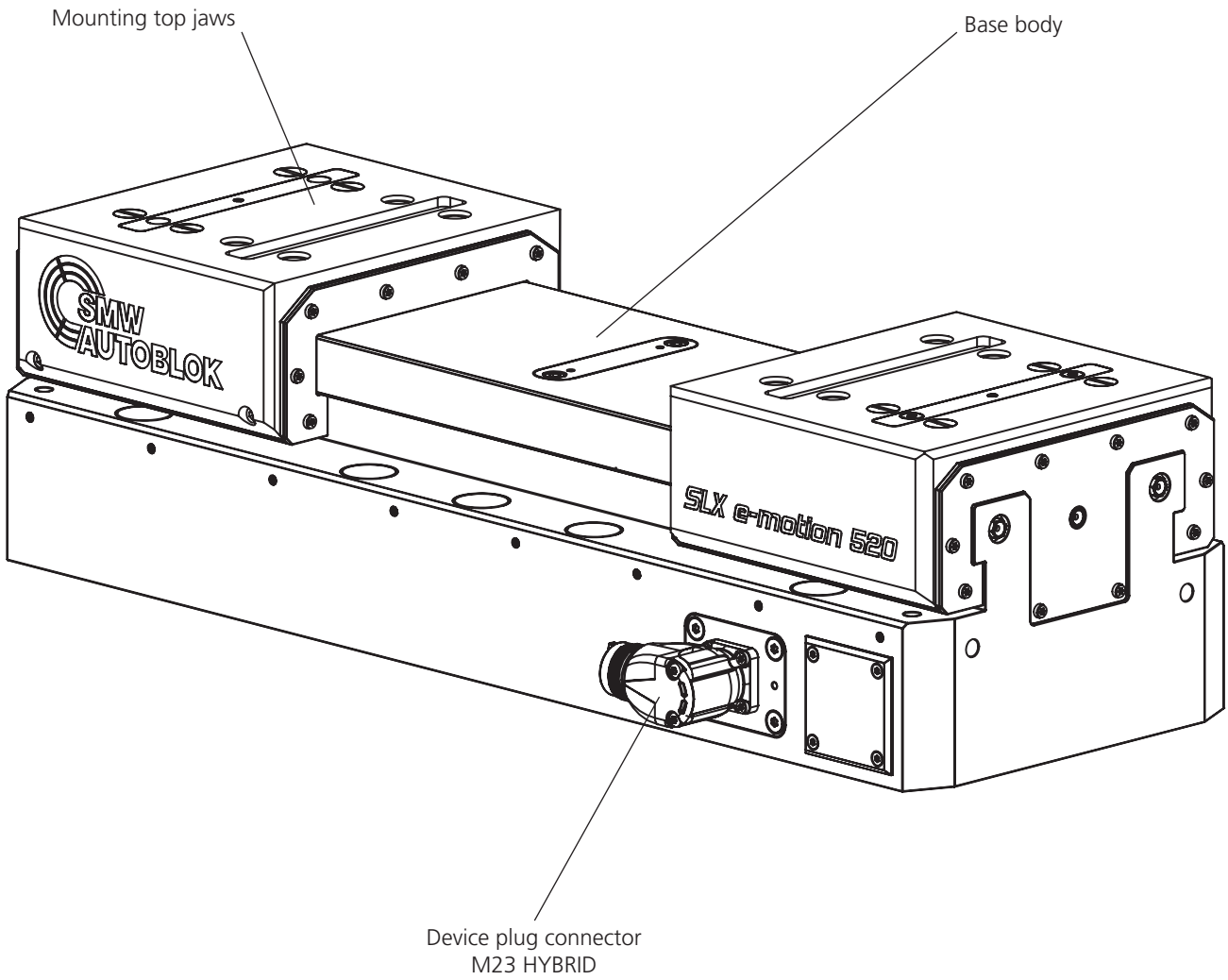




*1 Set = 2 pieces

Type	Id. No.	max. total clamping force	min. jaw height	Weight
SLX-520 e-motion	461640	40 kN	20,5 mm	2,5 kg

Notes



The **codes** on the **description of the type** have the following meaning:

SMW-AUTOBLOK Type ← → Overall length

SLX e-motion 520

Functional description

General description

The SLX e-motion is a mechatronic long-stroke vise that can be integrated into automation systems through PROFINET.

Due to the integrated position and force measuring system, precise positioning as well as precise clamping force is ensured.

The integration through PROFINET offers the advantage to exchange process data between SLX e-motion and controller in real time.

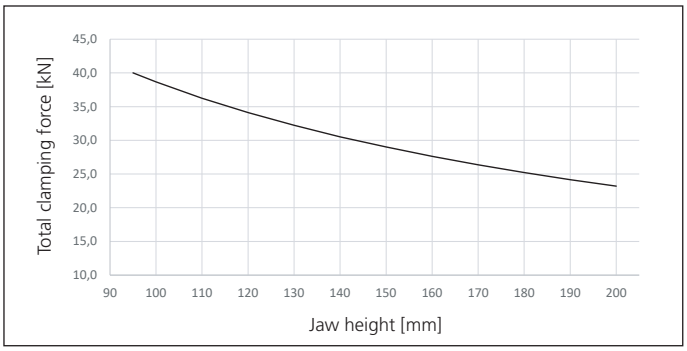
Function

SLX e-motion long-stroke vises are controlled electromechanically.

As a signal is given through PROFINET, an electric motor mechanically operates two spindles through a spur gear and the top jaws move in the direction of the SLX e-motion center.
The workpiece will be clamped with the preselected mode hand, position or force.

The SLX e-motion may only be used for O.D. clamping!

Total clamping force to jaw height

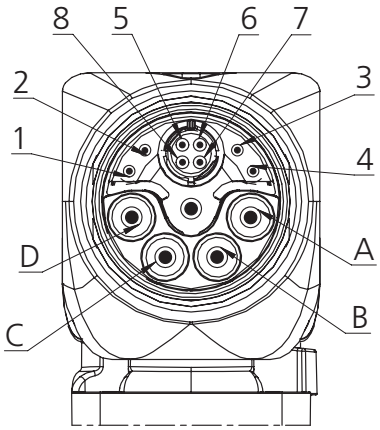


PROFINET is a trademark of the PROFIBUS and PROFINET User Organization (PI).

General

The following described installations provide only an overview of the standard installations on machine tables of common machine types.
If any special installations are requested, e.g. zero point mounting, please contact SMW-AUTOBLOK directly or one of our subsidiaries.

PIN-Assignment



PIN assignment M23 hybrid plug			
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3	green	STO GND	Safe hold GND
4	black 5	Nc	-
5	blue	Data RX-	ProfiNet
6	yellow	Data TX+	ProfiNet
7	white	Data RX+	ProfiNet
8	orange	Data TX-	ProfiNet

Installation of the SLX e-motion on the machine table

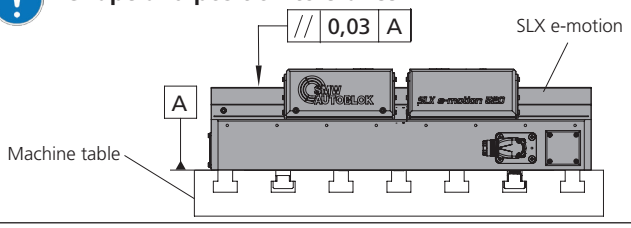
General

The following described installations provide only an overview of the standard installations on machine tables of common machine types.
If any special installations are requested, e.g. zero point mounting, please contact SMW-AUTOBLOK directly or one of our subsidiaries.

Preparing

Before installing the SLX e-motion, the contact surfaces should be cleaned carefully. In addition, the SLX e-motion must be checked for damage. The SLX e-motion is delivered in half-closed position.

Shape and position tolerance



Never use force!

Use lifting equipment for safe assembly/disassembly!

Tightening torque	Coefficient of friction of µges = 0.10 - 0.12					
Screws quality	M8	M10	M12	M16	M20	M24
Quality - 8.8	25 Nm	45 Nm	75 Nm	190 Nm	380 Nm	650 Nm
Quality - 10.9	35 Nm	65 Nm	110 Nm	280 Nm	550 Nm	950 Nm
Quality - 12.9	40 Nm	75 Nm	130 Nm	320 Nm	650 Nm	1100 Nm

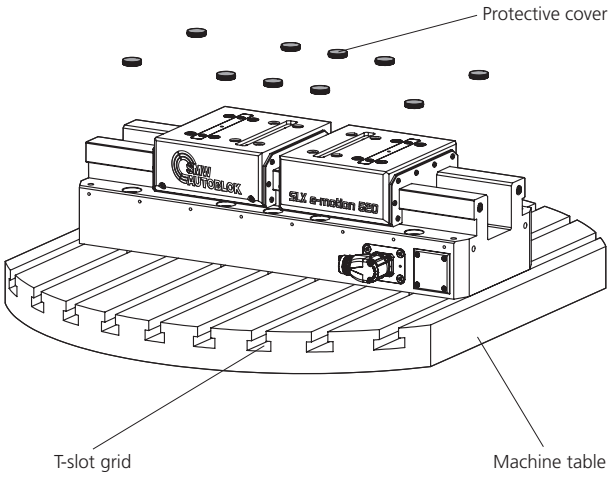
Chart: Reference value for tightening torques at 90% utilization of the yield strength.

Installation directly using the base body (pos. 01) of the SLX e-motion

1 **Position of the cylinder screws + T-nuts**

The protective cover must first be removed for installation. For this purpose, place a magnetic puller* on the protective cover and then pull it off with the magnetic puller toward the top.

In the base body (Pos.01) are several countersinks for cylinder screws ISO4762-M12 which allows the mounting on common machine tables with T-slot spacing of 63 mm. Place the SLX e-motion into position so that the countersinks are aligned with the T-slots.



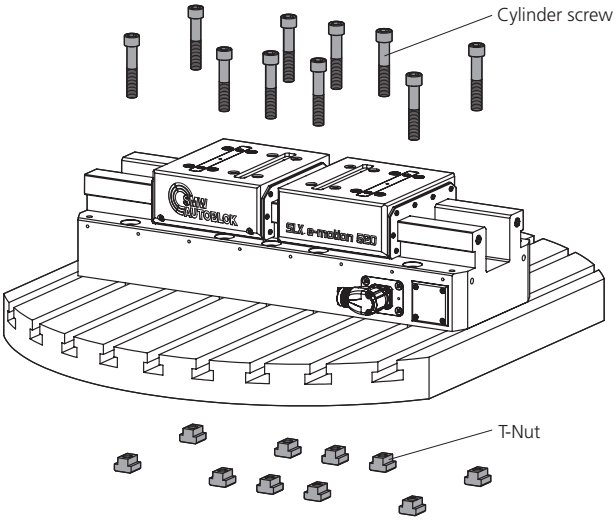
* Available from manufacturer

2 **Positioning Cylinder screw + T-nuts**

After the SLX e-motion is positioned, the cylinder screws + T-nuts will be inserted.
Therefore, insert the T-nuts into the T-slot provided until they match the hole/sink.

Insert M12 cylinder screws and tighten them alternately to specified torque Md. See table on page 14.

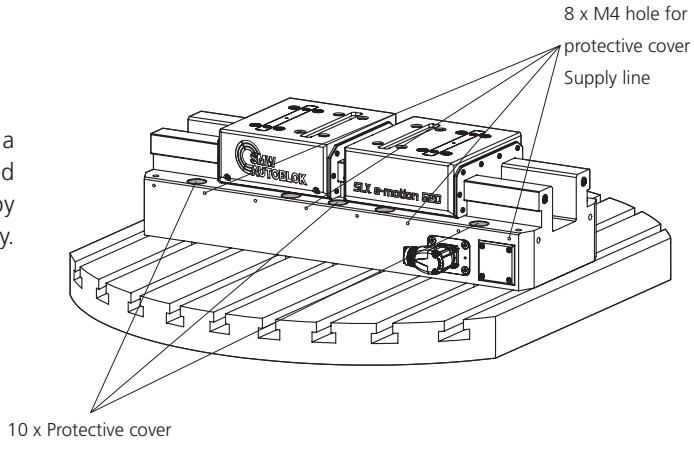
The manufacturer recommends mounting with 10x cylinder screws.



3 **Install protective covers**

Finally, put the protective covers back in place.

The SLX e-motion has M4 holes on the sides so that a protective cover can be mounted for the supply line routed on the side. The protective cover can be implemented by the customer and is not included in the scope of delivery.



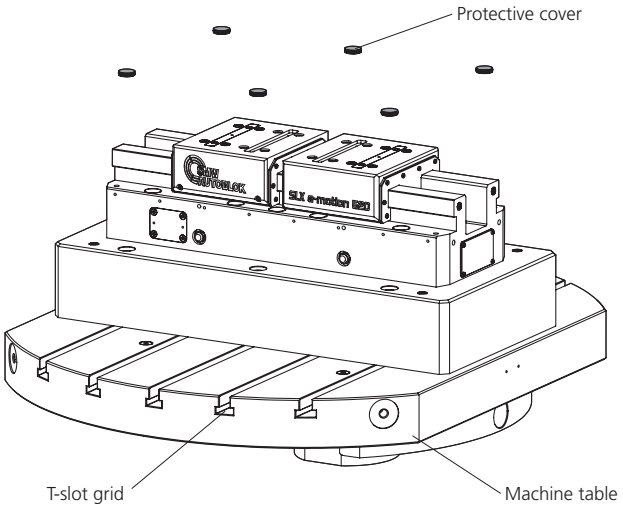
For safe installation using the cylinder screw T-slot connection, at least 8 cylinder screws should be used. The 2x cylinder screws in the center of the vise can be left unused for this purpose.
Always use original SMW-AUTOBLOK cylinder screws + T-nuts!

Installation using flange plate

1 **Remove protective cover**

The protective cover must first be removed for installation. For this purpose, place a magnetic puller* on the protective cover and then pull it off with the magnetic puller toward the top.

The flange has several countersinks for ISO4762-M12 cylinder screws which allow mounting on machine tables with T-slots.
Place the SLX e-motion with flange plate in position ensuring that the countersinks are aligned with the T-slots.



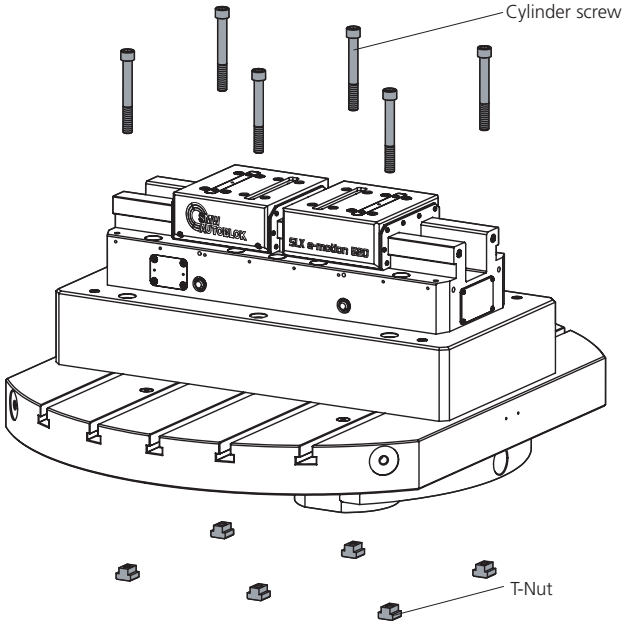
* Available from manufacturer

2 **Positioning cylinder screw + T-nuts**

Once the SLX e-motion with flange plate is in position, the cylinder screws + T-nuts are inserted. For this, insert the T-nuts into the T-slot provided until they match the hole/sink.

Insert M12 cylinder screws and tighten them alternately to specified torque Md. See table on page 14.

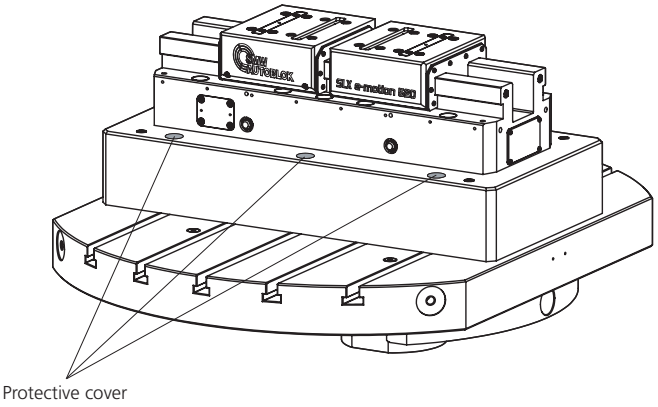
The manufacturer recommends mounting with 6x cylinder screws.



3 **Install protective covers**

Finally, put the protective covers back in place.

The supply line of the SLX e-motion can be routed through the flange plate and the machine table protected from chips and mechanical influences.

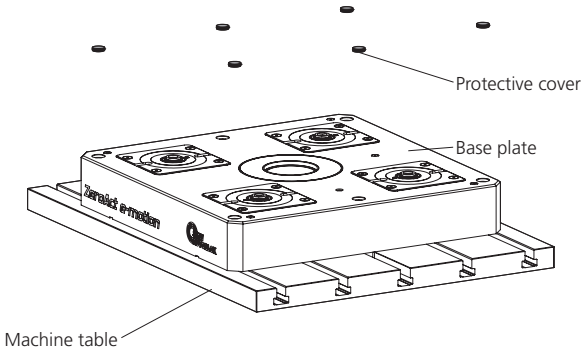


Installation with ZeroAct e-motion and F180 coupler system

1 Remove protective cover

The protective cover must first be removed for installation. For this purpose, place a magnetic puller* on the protective cover and then pull it off with the magnetic puller toward the top.

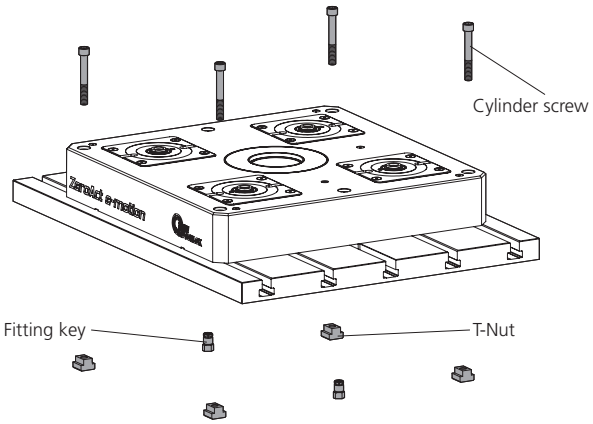
In the base body of the ZeroAct e-motion are several countersinks for ISO4762-M12 cylinder screws which allows the mounting on common machine tables with T-slot spacing of 63 mm.



2 Cylinder screw + T-nuts

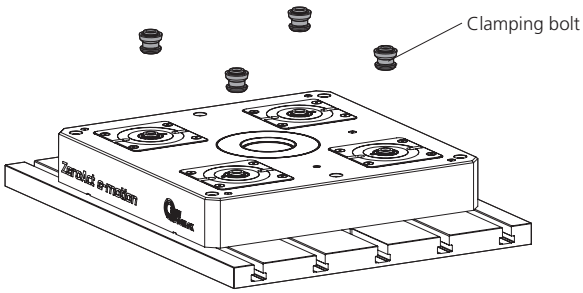
On the base plate, 2 fitting keys can be mounted in the center to enable pre-positioning. After the base plate is positioned using the fitting keys, the cylinder screws + T-nuts are inserted. Therefore, insert the T-nuts into the T-slot provided until they match the hole/sink.

Insert M12 cylinder screws and tighten them alternately to specified torque Md. See table on page 14.

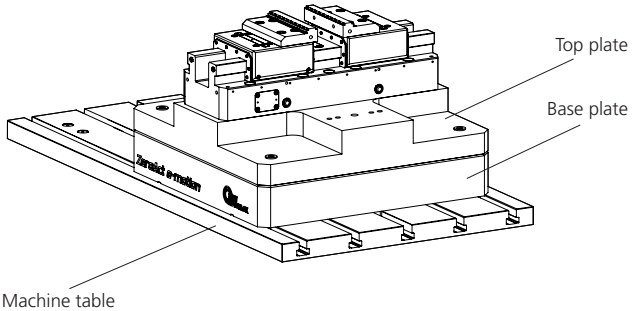


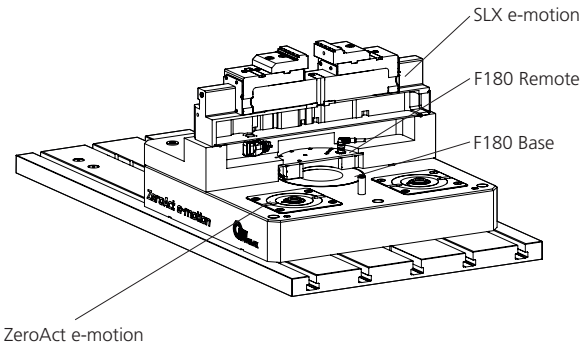
3 Mounting top plate + SLX e-motion

The top plate + SLX e-motion is mounted on the base plate by the ZeroAct e-motion using the clamping bolts attached to it.



4 Base plate + top plate + SLX e-motion

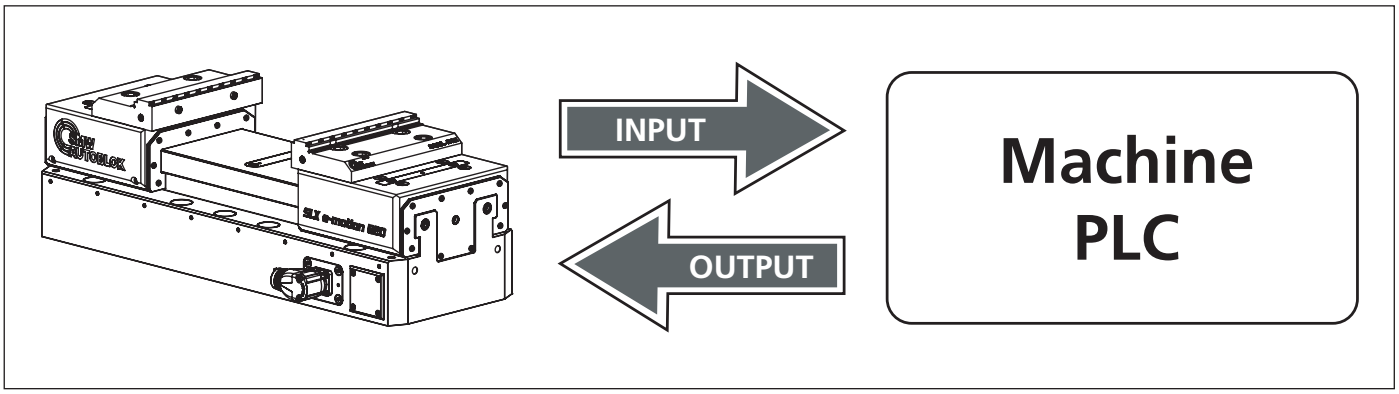




For safe installation using the cylinder screw T-slot connection, at least 4 cylinder screws should be used. Always use original SMW-AUTOBLOK cylinder screws + T-nuts!

Process data of the SLX e-motion

In order to be able to execute the single functions and to read out the current state of the vise, the process data over PROFINET is used. The process data consists of of in- and outputs between the SLX e-motion and the machine (PLC) .



Process data from the SLX e-motion to the control unit

Bit	Input	SLX e-motion - Machine (PLC)	Word	Datatype
Bit 0	StatusWord.xReady	Clamping drive is ready	0	UINT16
Bit 1	StatusWord.xBusy	Clamping drive is busy		
Bit 2	StatusWord.xDone	Clamping drive completed the last command		
Bit 3	StatusWord.xClamped	Workpiece is clamped. Continuous clamping force monitoring **(nominal force < actual force)**		
Bit 4	StatusWord.xReservedBit4	Reserved bit		
Bit 5	StatusWord.xReservedBit5	Reserved bit		
Bit 6	StatusWord.xLimitSwitchPos	Maximum positive position reached		
Bit 7	StatusWord.xLimitSwitchNeg	Maximum negative position reached		
Bit 8	StatusWord.xReservedBit8	Reserved bit		
Bit 9	StatusWord.xReservedBit9	Reserved bit		
Bit 10	StatusWord.xReservedBit10	Reserved bit		
Bit 11	StatusWord.xReservedBit11	Reserved bit		
Bit 12	StatusWord.xReservedBit12	Reserved bit		
Bit 13	StatusWord.xReservedBit13	Reserved bit		
Bit 14	StatusWord.xReservedBit14	Reserved bit		
Bit 15	StatusWord.xError	The SLX e-motion is in error state		
	wGripForceAct	Current clamping force **generated in the SLX e-motion**	1	UINT16
	dwPosAct	Current position of the vise **generated in the SLX e-motion**	2, 3	UINT32
	wDiagnoseID	Diagnose codes	4	UINT16
	wReserve1	Reserved word	5	UINT16
	wReserve2	Reserved word	6	UINT16

2.1 Statusword

Bit 0: xReady
This bit is TRUE when the vise is ready and no error is present. This bit stays TRUE, if the current command is completed.

Bit 1: xBusy
This bit is TRUE when the vise is in operation and remains TRUE until the bit for the corresponding command is reset.

Bit 2: xDone
This bit becomes TRUE when a command has been successfully completed. The bit becomes FALSE again when the current command in the control word is reset.

Bit 3: xClamped
This bit is TRUE if the target clamping force is reached. Once the actual force is lower than the target clamping force, this bit goes back to FALSE.

Bit 4, Bit 5: xReservedBit4, xReservedBit5
These bits are not used and are reserved for possible plant expansions.

Bit 6: xLimitSwitchPos
This bit is TRUE if the jaws of the vise reached the maximum positive position. The jaws can only be moved in the opposite direction. When the maximum position is undershot again, this bit becomes FALSE.

Bit 7: xLimitSwitchNeg
This bit is TRUE if the jaws of the vise reached the maximum negative position. The jaws can only be moved in the opposite direction. When the current position is higher than the minimum position, this bit becomes FALSE again.

Bit 8 to Bit 14: xReservedBit7…xReservedBit15
These bits are not used. Reserved for possible plant expansions.

Bit 15: xError
This bit is true as long as an error is present and has not yet been acknowledged.

2.2 wGripforceAct
„wGripforceAct" contains the value of the current clamping force per jaw in kN.
Min. output value to machine (PLC) = 0N; Max. output value to machine (PLC) = 21000N

2.3 dwPosAct
„dwPosAct" contains the value of the current position of the jaws in µm.
Min. output value to machine (PLC) = 4000µm; Max. output value to machine (PLC) = 101000µm

2.4 wDiagnoseID
„wDiagnoseID" contains the current diagnosis ID. It has a supporting effect in the event of an error message.

2.5 wReserve1 and wReserve2
„wReserve1" and „wReserve2" are not used and are reserved for possible plant expansions.

Process data from the controller to the SLX e-motion

Bit	Output	Machine (PLC) - SLX e-motion	Word	Datatype
Bit 0	ControlWord.xClose	The vise moves its jaws in the direction closed	0	UINT16
Bit 1	ControlWord.xOpen	The vise moves its jaws in the direciton opened		
Bit 2	ControlWord.xPositioning	The vise moves to the selected target position		
Bit 3	ControlWord.xClamp	The vise clamps with the selected target gripforce		
Bit 4	ControlWord.xReservedBit4	Reserved bit		
Bit 5	ControlWord.xReservedBit5	Reserved bit		
Bit 6	ControlWord.xReservedBit6	Reserved bit		
Bit 7	ControlWord.xReservedBit7	Reserved bit		
Bit 8	ControlWord.xReservedBit8	Reserved bit		
Bit 9	ControlWord.xReservedBit9	Reserved bit		
Bit 10	ControlWord.xReservedBit10	Reserved bit		
Bit 11	ControlWord.xReservedBit11	Reserved bit		
Bit 12	ControlWord.xReservedBit12	Reserved bit		
Bit 13	ControlWord.xReservedBit13	Reserved bit		
Bit 14	ControlWord.xReservedBit14	Reserved bit		
Bit 15	ControlWord.xResetError	Error reset		
	wTargetGripForce	Target gripforce. Relevant for mode "Clamping" (Controlword.xClamp). **Value defined in PLC-program/ machine**	1	UINT16
	dwTargetPosition	Target position. Relevant for mode "Positioning" (Controlword.xPositioning). **Value defined in PLC-program/ machine**	2, 3	UINT32
	wTargetSpeed	Target speed of the motor. Relevant for all modes. **Value defined in PLC-program / machine**	4	UINT16
	wReserve1	Reserved word	5	UINT16
	wReserve2	Reserved word	6	UINT16
	wReserve3	Reserved word	7	UINT16

3.1 Controlword

Bit 0: xClose
If this bit is set to TRUE, the vise moves the jaws forward towards the „closed" position. The command is stopped as soon as this bit is set to FALSE again.

Bit 1: xOpen
If this bit is set to TRUE, the vise moves the jaws forward towards the „opened" position. The command is stopped as soon as this bit is set to FALSE again.

Bit 2: xPositioning
If this bit is set to TRUE, the vise moves the jaws to the position selected in „wTargetPosition". The command is stopped as soon as this bit becomes FALSE again or the target position has been reached. If the clamp is already in the target window of the target position, no movement is executed.

Bit 3: xClamp
If this bit is set to TRUE, the vise moves the jaws forward until the clamping force set under „TargetGripForce“ is reached. If no clamping force can be built up before the selected target position is reached, the movement is stopped at this position. The command is also stopped as soon as this bit becomes FALSE again. If the vise is already in the target window of the target position, no movement is executed.

Note: In the „Clamping“ mode, the selected clamping force and target position are relevant. The target value that is reached first has priority. To be able to clamp a workpiece with the selected clamping force, the value „TargetPosition“ must be greater than the actual clamping position.

- Example 1: Position of the workpiece = 50000µm; Target clamping force = 15000N; Target position = 70000µm

The workpiece is clamped with the target clamping force of 15000N. If no clamping force is reached before the position 70000µm, the drive stops at this position.

- Example 2: Position of the workpiece = 50000µm; Target clamping force = 15000N; Target position = 50000µm

The workpiece is not clamped with the specified clamping force.
The jaws of the SLX e-motion are positioned at the target position of 50000µm, but no or only a very low clamping force is built up.

Bit 4 to Bit 14: xReservedBit4…xReservedBit6
These bits are not used and reserved for possible expansions of the plant.

Bit 15: xResetError
This bit resets the current error of the vise. If the error cannot be acknowledged, the cause of the error has not been eliminated.

3.2 wTargetGripForce
This value sends the target clampforce to the vise. This value has a range from 6000…21000N per jaw (12000…42000N total) and is necessary in the mode „Clamping“ (Controlword.xClamp).
„wClampForce“ has to be set in the machine (PLC program) and depends on the material as well as on the type of machining of the workpiece.

Min. value = 6000N; Max. value = 21000N

Caution:
Insufficient setting of the clamping force can lead to serious damage to human and machine!

3.3 dwTargetPosition
This value sends the target position to the vise. This value is necessary for the modes „Positioning“ (Controlword.xPositioning) and „Clamping“ (Controlword.xClamp).
„dwPosition“ has to be set in the machine (PLC program) and depends on the dimensions of the workpiece.

Min. value = 4000µm; Max. value = 101000µm

3.4 wTargetVelocity
This value contains the target speed of the motor and is relevant for all device modes. „wVelocity“ can be set in the machine (PLC program) to any value, but it is fixed to a minimum and maximum value which are pre-defined by the SLX. The target speed can be set to any time and is immediately taken over from the SLX.

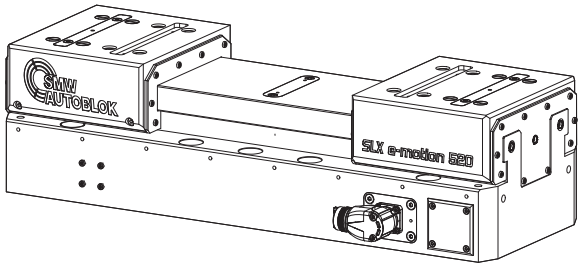
Min. value = 5000rpm; Max. value = 10000rpm

3.5 wReserve1 and wReserve3
These values are not used and are reserved for possible plant expansions.

Disassembly / Assembly Top jaws

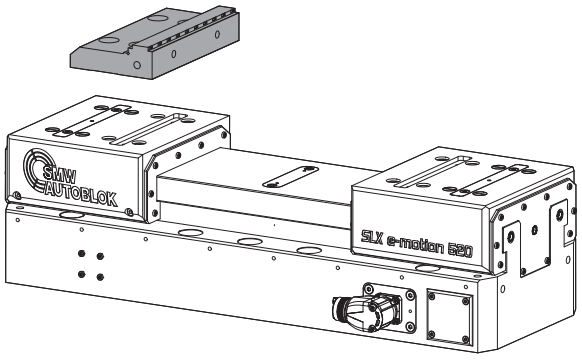
1 Clean the contact surfaces

Clean the contact surfaces of the top jaw, fixed jaw and loose jaw and check them for damage.



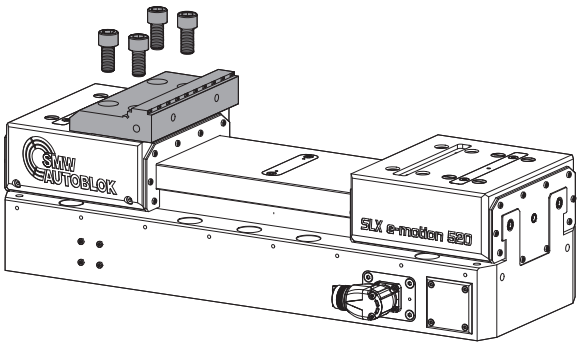
2 Assembly top jaw

Align the top jaw with its underside in the groove. Make sure that the top jaw touches down flat.



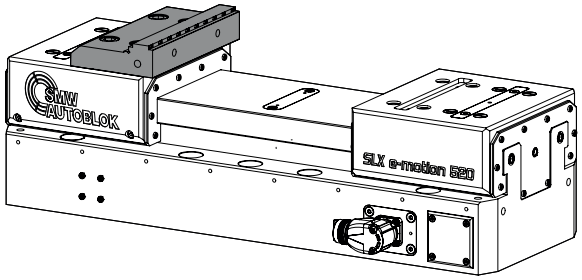
3 Fixing the top jaw

Insert M12 cylinder screws and tighten them alternately to specified torque Md. See table on page 14.



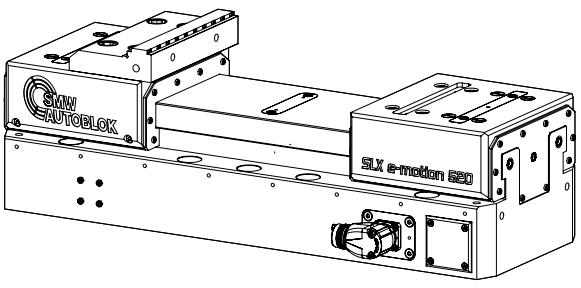
4 Alignment top jaw

The top jaw is aligned by the groove and the cylinder screws.



5 Disassembly top jaw

Disassembly in reverse order.



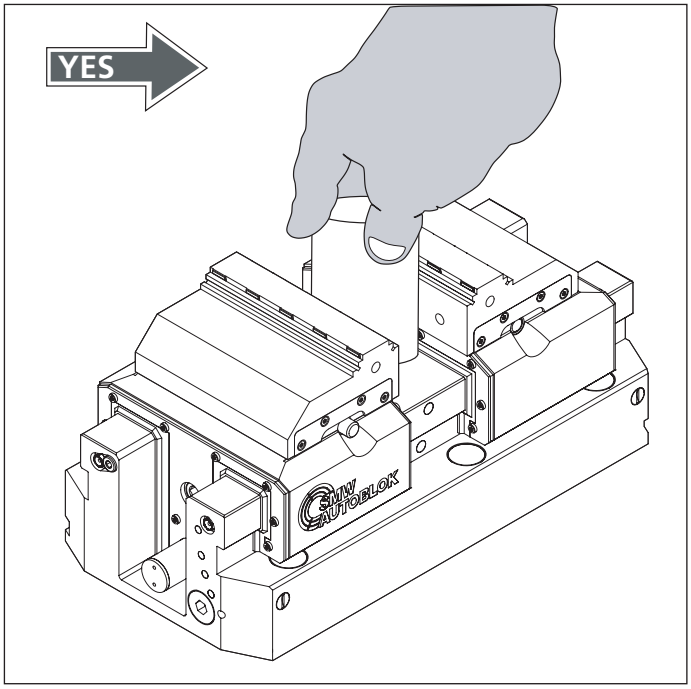
6 Check

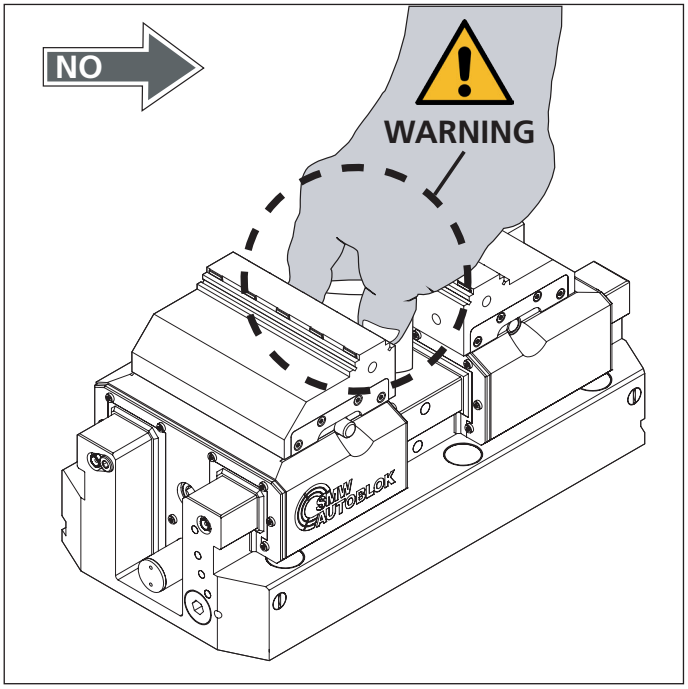
Clean all parts with VBF class A3 petroleum. Do not use gasoline or diesel fuel. Dispose of cleaning products in accordance with the regulations. Replace damaged spare parts with original SMW-AUTOBLOK spare parts.

Manual loading / setup operation

When loading the workpiece manually, there is a risk that fingers can be clamped between the clamping jaws or between the clamping jaw and the workpiece. To avoid this risk, the following instructions must be observed.

1. Ensure that the clamping speed of the clamping device is max. 4 mm/s..
2. Keep your fingers as far as possible away from the clamping jaws. Consider the use of suitable tools (e.g. lifting gear) to keep your fingers out of the danger zone.





12 months warranty

Product: SLX e-motion

SMW-AUTOBLOK provides a warranty on the purchased product for 12 months from the date of purchase as stipulated in our General Terms of Sale in the following cases:

- The defect was not known to the customer at the time of purchase.
- The defect is not due to wear as a result of use.
- The customer has not been negligent by improperly operating or incorrectly maintaining of our product. Refer to the enclosed instruction manual for operation and maintenance information.
- It is not a wear part such as seals, rollers or valves.
- Especially work piece touching parts such as jaws, locators, inserts, rollers and face drivers are excluded from warranty.
- Only original SMW-Autoblok parts have been used such as spare parts, seals, rollers, valves, jaws, locators, inserts and face drivers.
- There is evidence that the maintenance intervals in the operating instructions have been followed. The customer must provide maintenance documentation for this purpose. The maintenance performed must be documented in the maintenance section of the operating instructions and signed by a properly authorized person.

Please note that, if the above requirements are not met, the warranty is only invalid if the defect already existed at the time of transfer of risk, which is usually upon delivery of the product, unless the customer was aware of the defect at the time of transfer of risk.

24-months warranty
-optional-

Product: SLX e-motion

Against additional fee, SMW-AUTOBLOK offers a warranty on the purchased product for 24 months from date of purchase as a modification to the 12-month limitation period stipulated in our General Terms of Sale if the following conditions are met:

- An extension of the warranty from 12 to 24 months has been agreed upon in writing with SMW-AUTOBLOK.
- There is no defect due to wear as a result of use.
- The defect was not known to the customer at the time of purchase.
- The customer has not been negligent by improperly operating or incorrectly maintaining of our product. Refer to the enclosed instruction manual for operation and maintenance information.
- It is not a wear part such as seals, rollers or valves.
- Especially work piece touching parts such as jaws, locators, inserts, rollers and face drivers are excluded from warranty.
- Only original SMW-Autoblok parts have been used such as spare parts, seals, rollers, valves, jaws, locators, inserts and face drivers.
- There is evidence that the maintenance intervals in the operating instructions have been followed. The customer must provide maintenance documentation for this purpose. The maintenance performed must be documented in the maintenance section of the operating instructions and signed by a properly authorized person.
- Paid inspection by or at SMW-AUTOBLOK is mandatory.
  Minimum interval with maintenance documentation by SMW-AUTOBLOK.

Single shift operation	once in 24 months
2- and 3-shift operation	once in 12 months

  The customer is responsible for having inspections performed on time.
- The delivery location and machine location are within Germany.

Documentation of maintenance

Product: ____________________

Serialno.: ____________________

Regular and documented maintenance conserves the value of your work holding, and ensures warranty!

Maintained according to instruction manual	YES ☐	
Operating hours		
Name		
Date		
Signature		
Remarks		

Maintained according to instruction manual	YES ☐	
Operating hours		
Name		
Date		
Signature		
Remarks		

Maintained according to instruction manual	YES ☐	
Operating hours		
Name		
Date		
Signature		
Remarks		

Maintained according to instruction manual	YES ☐	
Operating hours		
Name		
Date		
Signature		
Remarks		

Documentation of maintenance

Product: ______________________

Serialno.: ______________________

Regular and documented maintenance conserves the value of your work holding, and ensures warranty!

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Documentation of maintenance

Product: ______________________

Serialno.: ______________________

Regular and documented maintenance conserves the value of your work holding, and ensures warranty!

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Documentation of maintenance

Product: ____________________

Serialno.: ____________________

> **!** Regular and documented maintenance conserves the value of your work holding, and ensures warranty!

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Maintained according to instruction manual	YES ☐ 
Operating hours	
Name	
Date	
Signature	
Remarks	

Empfangsbestätigung für die Betriebsanleitung
Confirmation of receipt of the instruction manual

Hiermit bestätigt die vom Betreiber/ Anwender beauftragte Person

This certifies the operator assigned by the operating company

Herr / Frau

Mr. / Mrs.

den Erhalt der Betriebsanleitung sowie deren Inhalte, insbesondere das Kapitel Sicherheit gelesen und verstanden zu haben.

hereby confirms to have received the instruction manual and to have read and understood the content, especially the chapters concerning safety.

Bediener	Datum	Operator	Date
Betreiber / Sachbeauftragter	Datum	Operating Company / Authorised person	Date

Id.Nr. / Id. No. :

Artikelbez. / Item :

Gewicht / Weight :

Seriennr. / Serialno. :

Bitte ausgefüllt zurückschicken an:

Please send the filled in form back to:

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Item	:	
Weight	:	
Serialno.	:	

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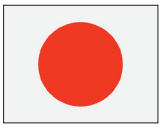

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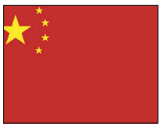

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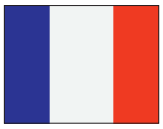

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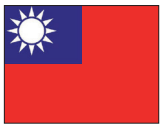

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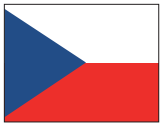

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