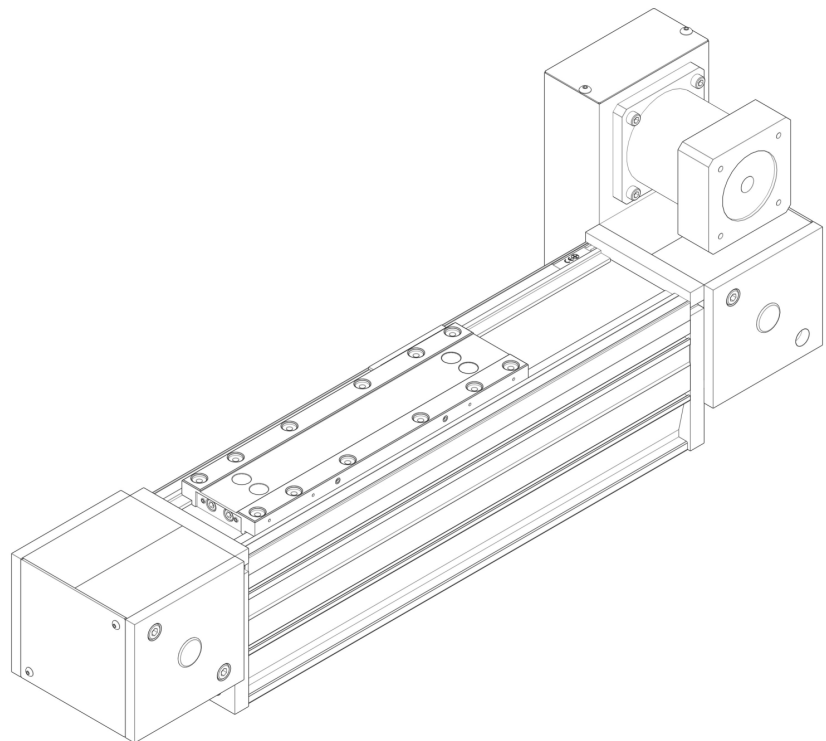




Assembly instructions

Product: Module 115/25
Product group: Linear unit (toothed belt drive)
Part number of the manual: 1421589



Original Instructions | Read carefully before use!

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Change history

Document code	Date	Change
MAN_DE_1416611_Modul115-25_R1a	February 2018	First edition
MAN_1416611_Modul115-25_R1b_EN	September 2018	Declaration of Incorporation, Maintenance, Drawing „Attachment variants dimensions“
MAN_DE_1416611_Modul115-25_R1c	December 2018	Harmonised standards, Parts list and drawing (TG1003321)

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EC Declaration of Incorporation

pursuant to the EU Machinery Directive 2006/42/EC, in accordance with Annex II, 1. B.

Manufacturer	IEF-Werner GmbH Wendelhofstrasse 6 78120 Furtwangen - Germany
Product	Module 115/25 Linear unit (toothed belt drive)
Authorized person responsible for the documentation	Frank Reichelt

The manufacturer hereby confirms that the incomplete machine named above complies with the following essential requirements of the **Machinery Directive 2006/42/EC**.

The technical documentation has been drawn up in accordance with Annex VII, Part B and may be sent to the national authorities in electronic form upon substantiated request.

The following additional directives have also been applied:

- EMC Directive 2014/30/EC
- Low-Voltage Directive 2014/35/EU

The following harmonised standards have been applied:

- EN ISO 12100-1,-2:2010
- EN ISO 13850:2015
- EN ISO 13857:2008
- EN 60204-1:2006/A1:2009

Commissioning of the incomplete machine is prohibited until it has been established that the machine, in which the incomplete machine is to be installed, complies with the provisions of the **Machinery Directive 2006/42/EC**.

Furtwangen, 1. August 2018

Stefan Deck (Managing Director)

Annex I, Article:		Fulfilled
1.1	General information	
1.1.1	Definitions	
1.1.2	Principles for the integration of safety	x
1.1.3	Materials and products	x
1.1.4	Lighting	
1.1.5	Design of the machine with regard to handling	x
1.1.6	Ergonomics	
1.1.7	Operator stations	
1.1.8	Seats	
1.2	Control systems and command devices	
1.2.1	Safety and reliability of control systems	
1.2.2	Control devices	
1.2.3	Start-up	
1.2.4	Shutdown	
1.2.4.1	Normal shutdown	
1.2.4.2	Shutdown for operational reasons	
1.2.4.3	Emergency shutdown	
1.2.4.4	Machinery in its entirety	
1.2.5	Selection of control modes or operating modes	
1.2.6	Power supply failure	
1.3	Protective measures against mechanical hazards	
1.3.1	Risk of loss of stability	
1.3.2	Risk of breakage during operation	x
1.3.3	Risks due to falling objects and ejected objects	
1.3.4	Risks due to surfaces, edges and corners	x
1.3.5	Risks due to multiple combined machines	
1.3.6	Risks due to changes in the use conditions	
1.3.7	Risks due to moving parts	
1.3.8	Selection of guards and protective devices to protect against risks from moving parts	

Annex I, Article:		Fulfilled
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1.3.8.2	Moving parts involved in the work process	
1.3.9	Risk of uncontrolled movements	
1.4	Requirements for guards and protective devices	
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1.5.8	Noise	
1.5.9	Vibration	
1.5.10	Radiation	
1.5.11	External radiation	
1.5.12	Laser radiation	
1.5.13	Emissions of hazardous materials and substances	
1.5.14	Risk of being enclosed within the machine	
1.5.15	Risk of slipping, tripping and falling	
1.5.16	Lightning strike	
1.6	Maintenance	
1.6.1 e	Machine maintenance	

Annex I, Article:		Fulfilled
1.6.2	Access to the operating stations and the points of intervention for maintenance	
1.6.3	Disconnection from energy sources	
1.6.4	Interventions by operating personnel	
1.6.5	Cleaning of internal machine parts	
1.7	Information	
1.7.1	Information and warnings on the machine	
1.7.1.1	Information and information devices	
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1.7.2	Warning of residual risks	
1.7.3	Machine markings	x
1.7.4	Operating instructions	x
1.7.4.1	General principles for the drafting of the operating instructions	

1 About this manual

1.1 General information

This manual is a component of the machine/product and offers information concerning safe use. The manual must therefore be kept on hand for the entire life cycle and must be accessible at all times.

The manual must be read, understood and complied with in all aspects by all persons who work on and with the machine/product and who are responsible for the machine/product.

The illustrations are intended to clarify the content and may therefore deviate from reality.

1.2 Disclaimer of liability

This machine/product has been designed and built in accordance with the applicable standards and regulations as well as the state of the art. Therefore, all information and instructions in this manual must be followed to ensure smooth operation. For personal injury and property damage resulting from the following cases, IEF-Werner GmbH accepts no liability:

- Failure to follow the instructions in this manual
- Non-intended use of the machine/product
- Use of insufficiently qualified/trained personnel
- Modifications, alterations or additions to the machine/product made without the consent of IEF- Werner GmbH
- Failure to comply with maintenance and repair measures
- Use of non-approved spare parts and wear parts

1.3 Customer service

Our customer service department will help you with any problems with the machine.




Address:	IEF-Werner GmbH Wendelhofstrasse 6 DE-78120 Furtwangen
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We are grateful for suggestions for improvement and notification of any errors. Please send us your suggestions or notify us of any errors so that the content is always up to date and our products can be further developed.

2 Basic safety instructions

2.1 Content references

Presentation of the warnings

 DANGER
Warning – personal injury! Failure to comply with the safety regulations will result in death or serious injury.
 WARNING
Warning – personal injury! Failure to comply with the safety regulations can result in death or serious injury.
 CAUTION
Warning – personal injury! Failure to comply with the safety regulations can result in minor or lesser injury.
ATTENTION
Warning – material damage! Failure to comply with regulations will result in material damage.





Important information

Helpful tips and information concerning use.

Symbols

These symbols are either included in the manual or are attached to the machine:

	General warning symbol
	Warning – hand injuries or danger of crushing!

Marking elements

The following marking elements are used in this manual:

Element	Description
■	Designates bullet points.
▶	Designates instructions.
▷	Designates results of instructions.


2.2 Target groups and personnel qualifications

This manual is intended for the owner and all persons who work on and with the product

The following table lists the qualifications required for the various tasks.

Group of people	Qualifications
Operator/authorised personnel	The operator (authorised personnel) is in a position to carry out the work entrusted to him on the basis of training conducted by the owner and the operator's knowledge and experience.
Specialists	The specialist is able to carry out tasks on the machine/product due to his professional training, knowledge and experience. The specialist is specially trained for the environment in which he works and is familiar with the relevant standards and regulations. The specialist can also recognize and avoid possible dangers on his own. An example of a specialist is an electrician.
Maintenance technician	The maintenance technician is the person commissioned by the owner with the installation, maintenance, troubleshooting and dismantling of the product. The maintenance specialist is able to carry out the tasks on the machine cited above, due to his professional training, knowledge and experience. He is familiar with the relevant standards and regulations and can recognize and avoid possible dangers on his own.

2.3 Obligations of the owner

- ▶ Read the manual before you install/use the product
- ▶ Ensure that the manual is always available and read by the operating personnel
- ▶ Define the areas of responsibility for the operating personnel and ensure that these areas of responsibility are complied with
- ▶ Operate the machine/product only in technically faultless condition
- ▶ No structural changes may be made to the machine/product without coordination with IEF-Werner GmbH
- ▶ Comply with the described maintenance intervals and properly execute maintenance tasks
- ▶ Only trained and instructed personnel are allowed to work on the machine/product
- ▶ Immediately rectify defects, irregularities and malfunctions
- ▶ Operate the machine/product only under the specified ambient conditions and within the specified capacity limits, connected loads and settings (see section 3.1 Technical data,  17)
- ▶ Dispose of used operating materials such as lubricants, electronic scrap or batteries (if applicable, via specialist companies) in accordance with the applicable legal regulations
- ▶ Immediately replace damaged or illegible safety and danger notices

2.4 Obligations of operating personnel

- ▶ Read the manual before you install/use the product
- ▶ Follow the applicable safety, accident and nature conservation regulations
- ▶ Comply with the safety and hazard information
- ▶ Only work on this machine/product if the machine/product is in technically faultless condition
- ▶ Immediately report defects, irregularities and malfunctions to the responsible person
- ▶ Immediately report damaged or illegible safety and danger notices to the responsible person
- ▶ Do not remove or bypass any safety devices or covers

2.5 Intended use

This incomplete machine is only intended to be installed in or joined together with other (incomplete) machines or equipment in order to form, together with other machines or equipment, a complete machine within the meaning of the Machinery Directive. Only after a conformity assessment procedure, in accordance with the Machinery Directive, has been carried out for the complete machine, may it be put into operation.

Function

The Linear unit (toothed belt drive) Module 115/25 is used for mass transport.

A toothed belt on a hollow drive shaft converts the rotary motion of a motor into a linear movement. Thus the carriage moves forward and back. The position of the slide can be scanned with end position switches / reference switches.

The product can be used as a single-axis or as gantry axis. In combination with other components, complex multi-axis positioning systems can be set up.

Personnel qualifications

Only specially instructed qualified personnel are allowed to perform all installation, setup, and maintenance tasks (see 2.2 Target groups and personnel qualifications, 13).

Environment

The product must not be used under conditions involving increased proportions of contamination or abrasive dusts, as additional protection measures, such as a bellows cover, etc. are not present.

The product is intended exclusively for commercial use. It is not suitable for operation in potentially explosive or chemically aggressive areas.

Non-intended use

Any use beyond the intended use or any other use is considered misuse. Misuse includes:

- Failure to comply with the prescribed ambient conditions, capacity limits, connected loads and settings (see section 3.1 Technical data, 17)
- Failure to comply with maintenance and repair measures
- The product must not be used, for specific applications, i.e. the conveyance of people or animals, as well as press bending device for the cold processing of metal.
- Likewise use of the linear module without additional measures is not possible in special application areas, such as chemicals, food products, or the Ex area. If in doubt consult with the manufacturer.

2.6 Residual risks/danger zones

WARNING

Personal injury and material damage if the product is installed in a vertical or diagonal position!

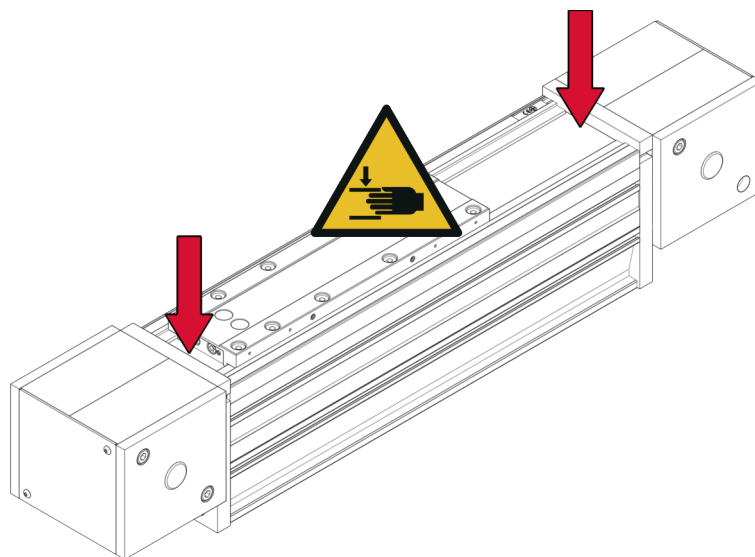
In the event of a power failure or toothed belt breakage the work mass falls downward.

- ▶ Ensure that only motors with integrated spring-loaded holding brake are used.
- ▶ Check whether additional measures that safeguard against damage due to toothed belt breakage are externally required (e.g. pawls, moving bolts, or emergency buffers).

WARNING

Moving masses can injure personnel or damage objects (crushing / shearing).

- ▶ With suitable safety devices ensure that no one can reach into the crush points (between slide and base body), for example through protective grating elements.
- ▶ Ensure that there are no foreign objects in the movement range.



Possible crush points (sample illustration)

CAUTION

Risk of burns due to hot surfaces!

Motor housings can heat up and cause burns when touched.

- ▶ Attach a protective device as needed.
- ▶ Allow the motor housing to cool before touching it.

CAUTION

Danger of burn injuries and sparking if the motor plug is plugged in/unplugged in energised status.

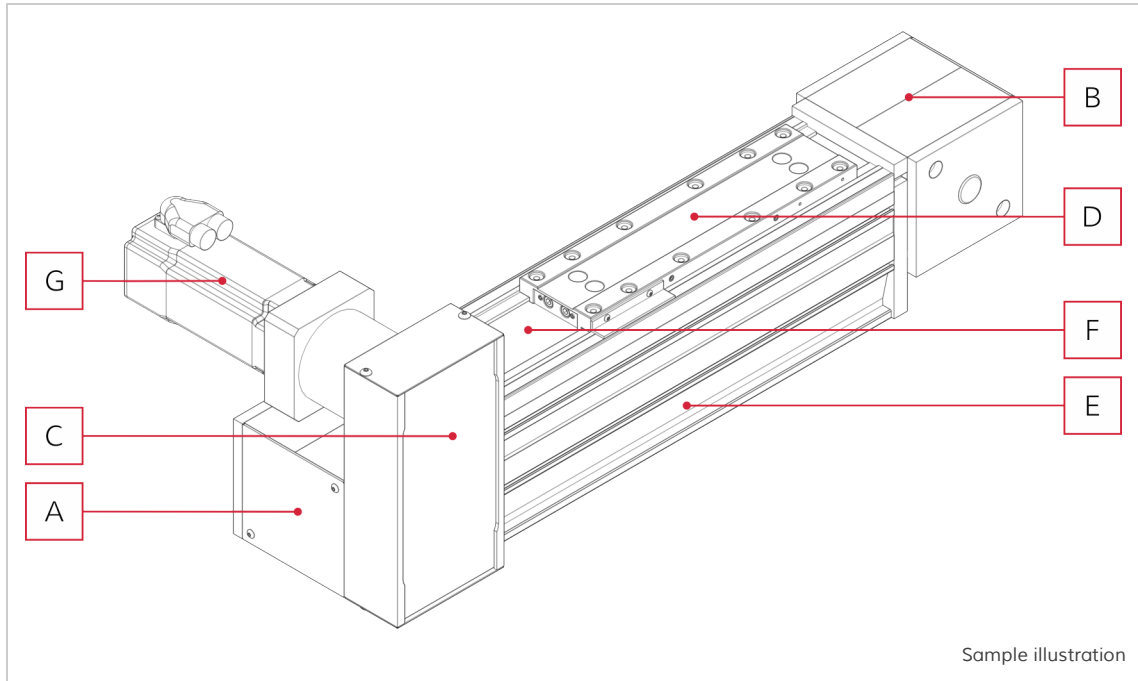
- ▶ Do not plug in or unplug the motor plug in energised status.

3 Product description

3.1 Technical data

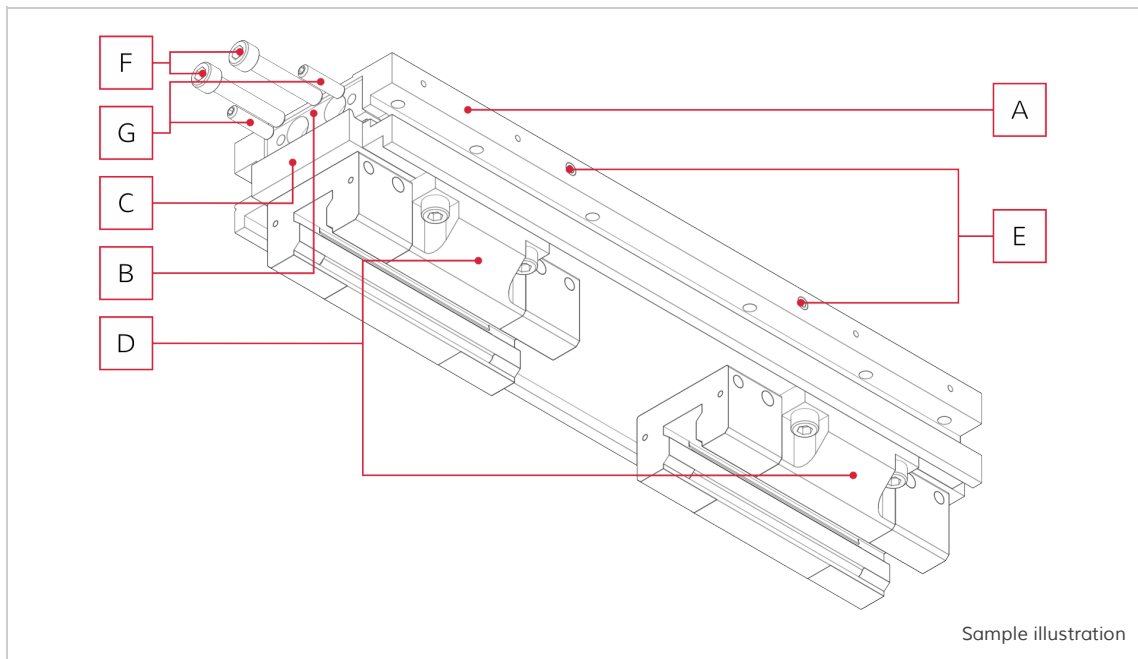
Length	755 mm - 7175 mm
Slide length (standard slide)	300 mm, 470 mm
Stroke	140 mm - 6560 mm Preferred stroke: $140 + n \cdot 60$ mm (n: any number ≤ 107)
Weight	23.2 kg (at 140 mm stroke with gear unit housing and toothed pulley without motor and gear unit)
	Mass moved: 10 kg (with deflector rollers, toothed pulley and belt without motor and gear unit)
Weight increase per 100 mm stroke	0.95 kg
Maximum movement speed (depending on load and gear unit)	5 m/s
Repeat accuracy	+/- 0.05 mm
Toothed belt width	75 mm / ATL10
Cable tensile strength toothed belt	11200 N
Moment of area inertia of the base body	$I_x 5.69 \times 10^6 \text{ mm}^4$ $I_y 6.20 \times 10^6 \text{ mm}^4$
Feed constant without gear unit	250 mm/revolution
Standard reduction ratios – planetary gear	3:1, 4:1, 5:1, 7:1, 8:1, 10:1
Recommended maximum load (depends on stroke, motor and gear unit)	150 kg

3.2 Overview



- | | | | |
|----------|---------------------------|----------|----------------|
| A | Drive set | B | Deflector unit |
| C | Belt drive | D | Slide |
| E | Base body / profile | F | Toothed belt |
| G | Servo motor or step motor | | |

3.2.1 Slide

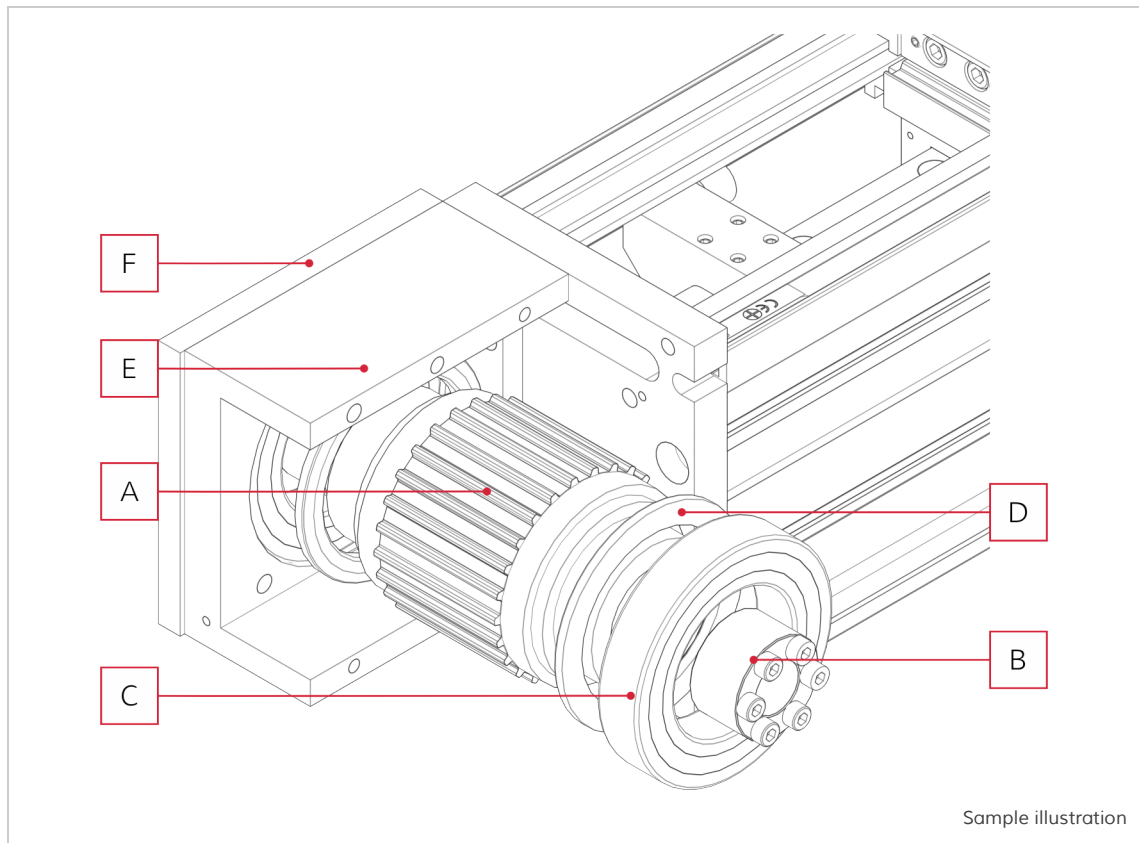


- | | |
|--|------------------------|
| A Slide plate | B Thrust piece |
| C Tooth segment | D Guide slide |
| E Lubricating nipples (hopper lubricating nipples)* | F Tension screw |
| G Securing threaded pin | |

*The lubricating nipples on the opposite side of the slide are connected by a bore

3.2.2 Drive set

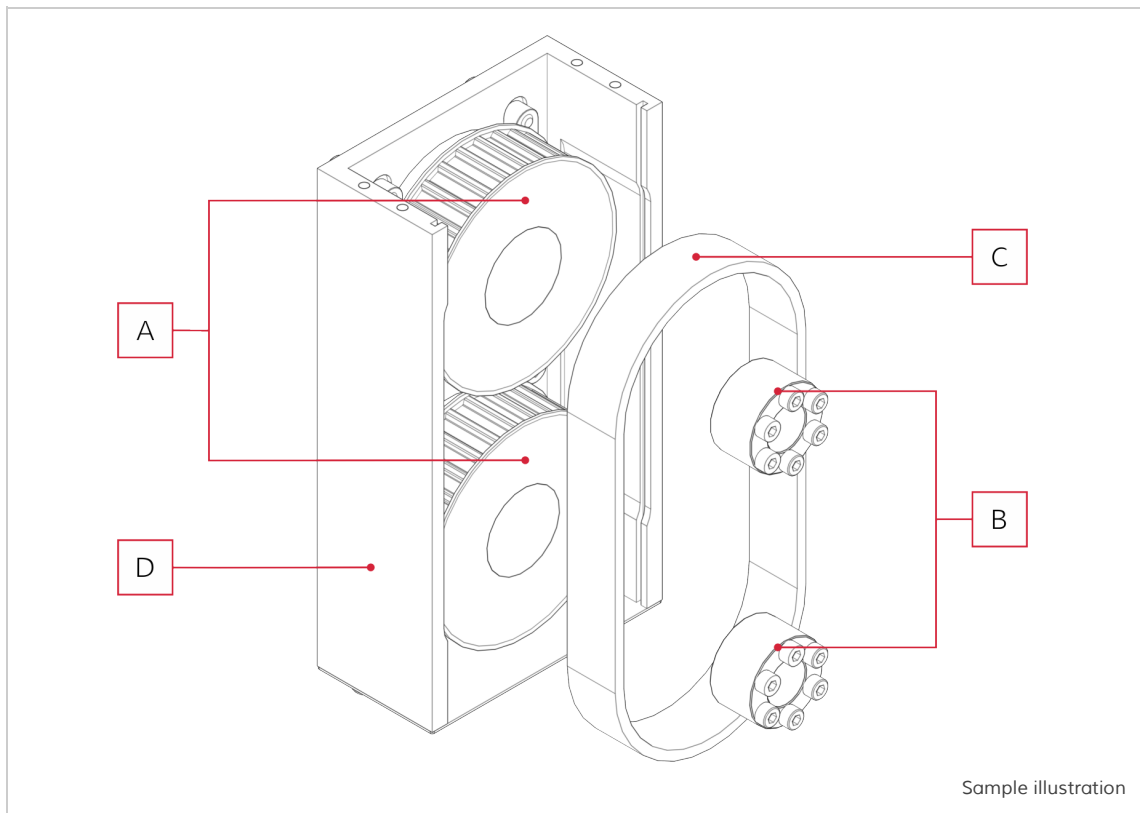
The drive set is the same for all motor attachment variants. Torque feed occurs via the middle bore. Depending on the motor attachment variant, in this bore a shaft is clamped in via two clamp sets or an elastomer coupling.



Sample illustration

- | | |
|-----------------------------------|------------------------|
| A Toothed pulley | B Clamp set |
| C Deep-groove ball bearing | D Bore disc |
| E Gear unit housing | F Bearing cover |

3.2.3 Belt drive



A Toothed pulley

C Toothed belt

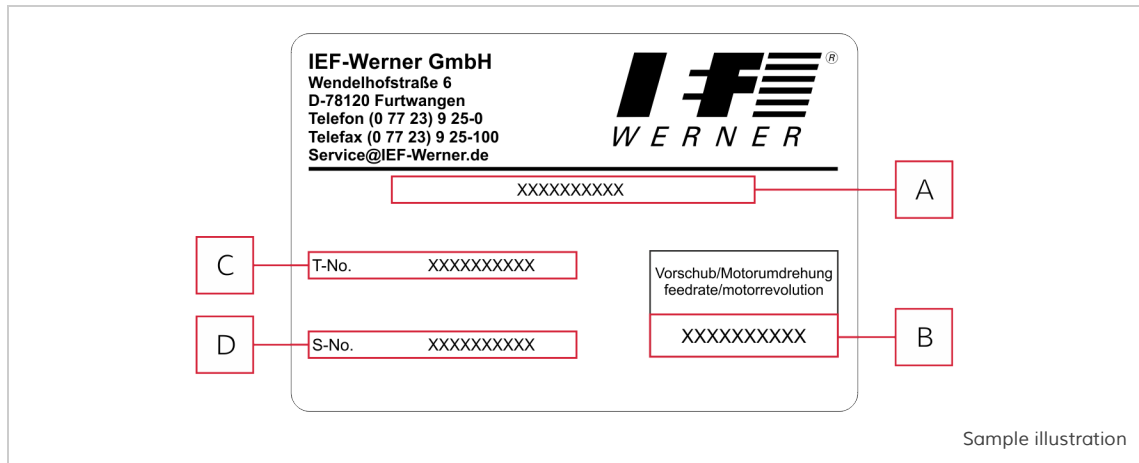
B Clamp set

D Gear unit housing

Sample illustration

3.3 Type plate / identification of the product

The type plate with the following information is affixed on the product:



A Product designation

B Feed / motor revolution

C Part number

D Serial number

3.4 Proximity switches (optional)

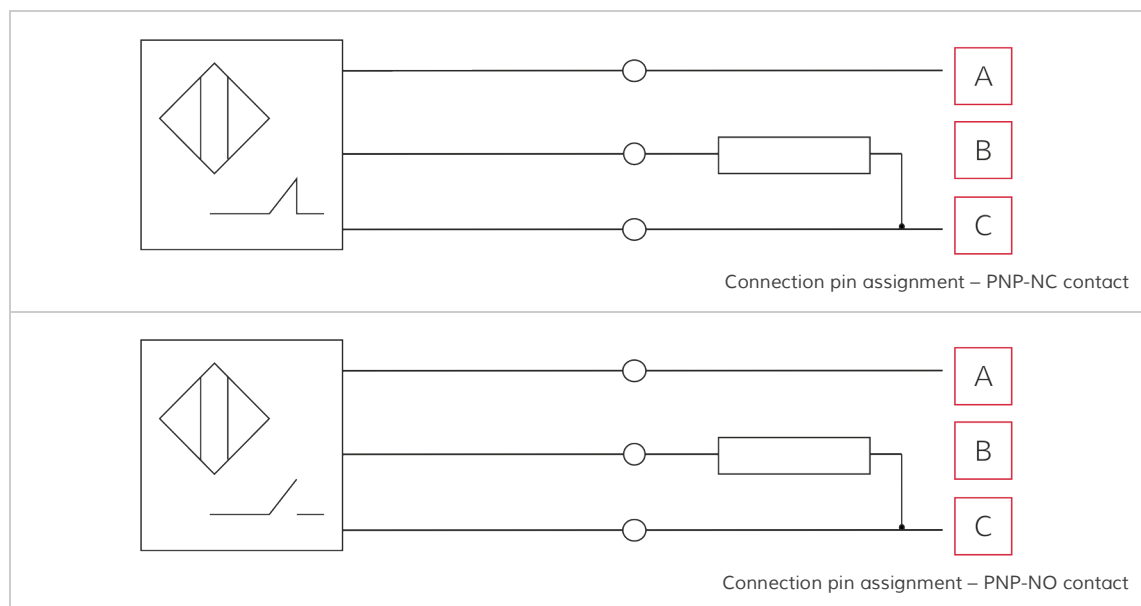
Standard when the product is delivered without proximity switches. If also ordered, the product can be equipped with the following proximity switches:

- End-position switches (inductive proximity switches PNP-NC contact, article number: 025165)
- Reference switches (PNP-NO contact, article number: 726744)
- End position switches and reference switches

For stroke limitation two end position switches can be used.

The end position switches and their supply cables are in a cable duct integrated in the base body and are routed together (possibly with the reference switch) to a plug connector (see 3.4.2 Plug connector assignment, [§ 24](#)). A plastic strip serves as cover of the cable duct. The plastic strip must be removed to replace an end position switch.

The active surface of the end position switch is marked with coloured circle symbol (PNP-NC contact: green dot, PNP-NO contact: red dot).

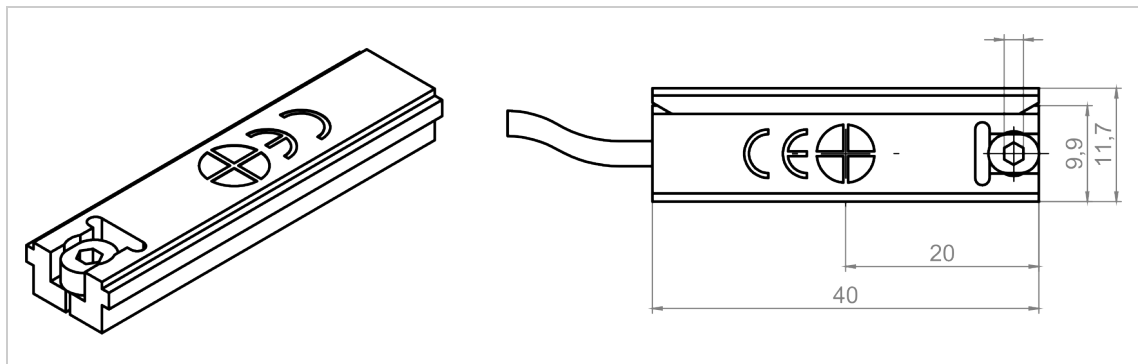


A	Brown	+ 24 VDC
B	Black	Signal
C	Blue	0 V

3.4.1 Technical data PNP-NC contact / PNP-NO contact

Dimensions / drawing	See Appendix
Operating voltage, incl. ripple	(10 ... 30) VDC \leq 15 %
Current-carrying capacity	$I_a \leq$ 200 mA
Voltage drop at I_a max.	\leq 2.5 V
Switching frequency	\leq 1000 Hz
Auto-generated current consumption	\leq 15 mA
Nominal switching distance on steel	1.5 mm \pm 10 %
Switching hysteresis	(3 ... 20) %
Reproducibility (U = const.)	\pm 0.01 mm
Operating temperature	- 25° C ... + 70° C
Protection class	IP 65
Short-circuit proof	Yes
Protected against polarity reversal	Yes

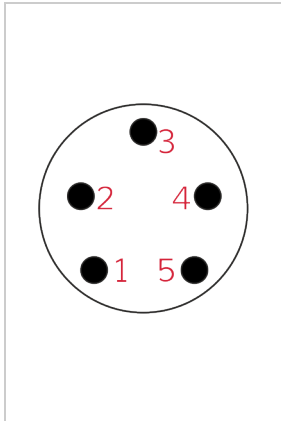
3.4.2 Dimensions PNP-NC contact / PNP-NO contact



3.4.4 Plug connector assignment

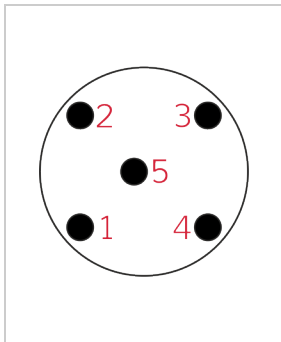
The end position switches and their supply cables are in a cable duct integrated in the base body and are routed together (possibly with the reference switch) to a plug connector.

Plug connector variant 1: IEF-Werner standard plug connector






Pin	assignment	Cable
1	+ 24 V	Brown
2	End position switch negative movement direction	Green
3	0 V	White
4	End position switch positive movement direction	Yellow
5	Reference switch	Grey

Plug connector variant 2: M12 plug connector




Pin	assignment
1	+ 24 V
2	End position switch negative movement direction
3	0 V
4	End position switch positive movement direction
5	Reference switch

4 Installation

 WARNING
<p>Warning – personal injury due to electric shock!</p> <ul style="list-style-type: none"> ▶ Before all tasks on the product: De-energise the system and safeguard it from being switched on. ▶ Only specialised personnel are allowed to install and commission the product (see  2.2 Target groups and personnel qualifications,  13).

4.1 Install position

The install position can be selected by the owner, the product can be used in a horizontal or vertical position. In the case of vertical/diagonal install position note the following warning:

 WARNING
<p>Personal injury and material damage if the product is installed in a vertical or diagonal position!</p> <p>In the event of a power failure or toothed belt breakage the work mass falls downward.</p> <ul style="list-style-type: none"> ▶ Ensure that only motors with integrated spring-loaded holding brake are used. ▶ Check whether additional measures that safeguard against damage due to toothed belt breakage are externally required (e.g. pawls, moving bolts, or emergency buffers).

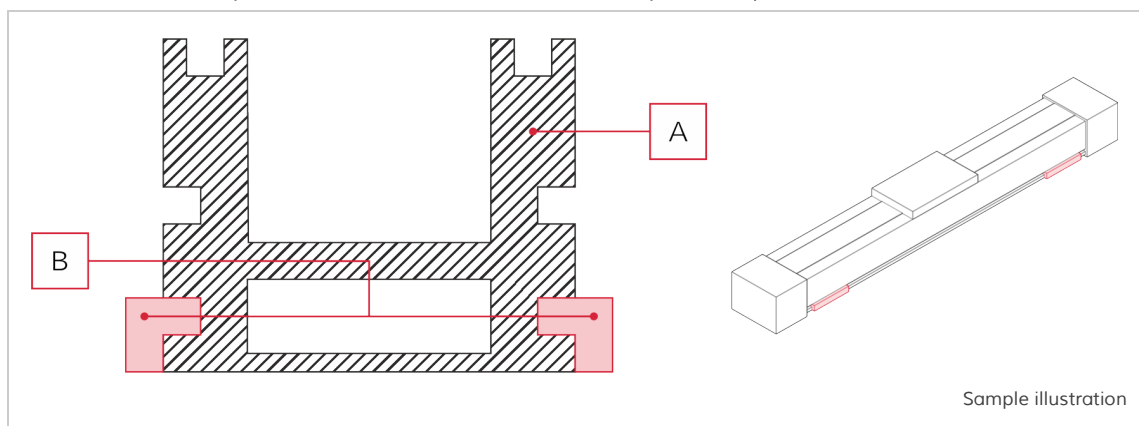
4.2 Threaded torque for screw connections

Screw	8.8						
	M3	M4	M5	M6	M8	M10	M12
Tightening torque [Nm]	1.1	2.5	5	8.5	21	41	71

4.3 Installation/fastening (mechanical installation)

The following instructions must be complied with when fastening the product:

- Tightening torques see 4.2 Threaded torque for screw connections, 26.
- For installation of the product clamping elements must be used; see the Appendix for the dimensions of the clamping elements.
- The product must be installed on a level surface (levelness of 0.1 mm/m²).
- It must be possible to move the slide freely.
- Install product without tension and bends.
- Do not drill any addition bores on the base body of the product.



A Linear axis

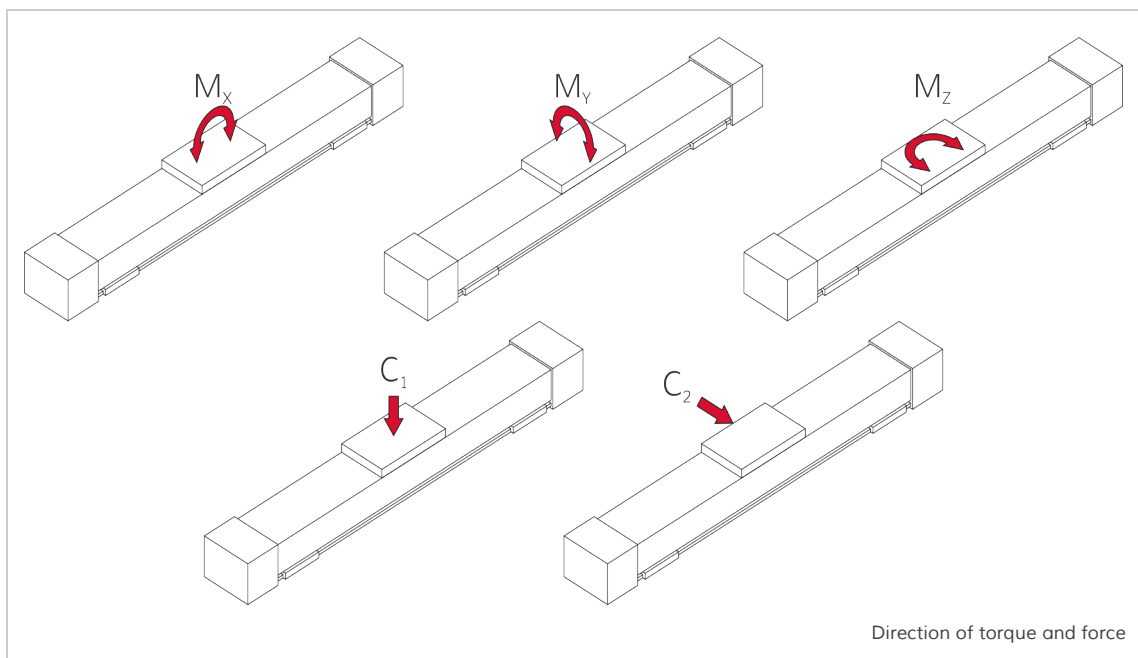
B Clamping elements

4.3.1 Fastening the components on the slide

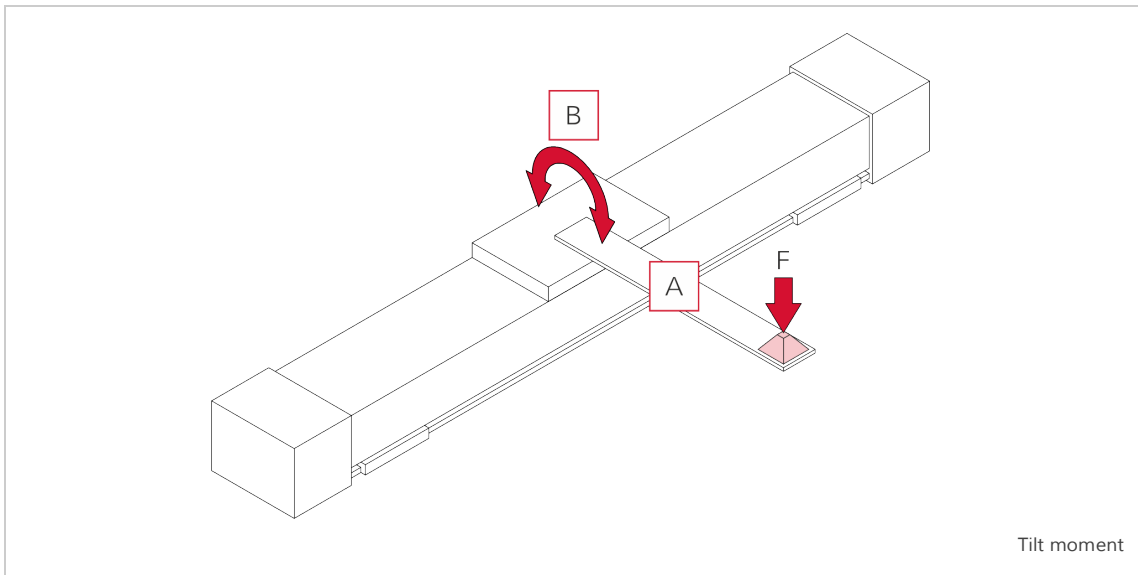
Components (gripper modules, cylinders, etc.) are fastened on the product via the hole pattern (see Appendix) on the slide.

Comply with the following points when fastening:

- For tightening torques, see 4.2 Threaded torque for screw connections, 26 and for load values (see below).
- Place the payload in such a manner that the tilt moment resulting from force F (parallel to the movement axis and the lever arm) remain low.
- When using the product, note that due to the design structure of the linear unit, the torques that occur can cause an increased lateral tilting of the slide.

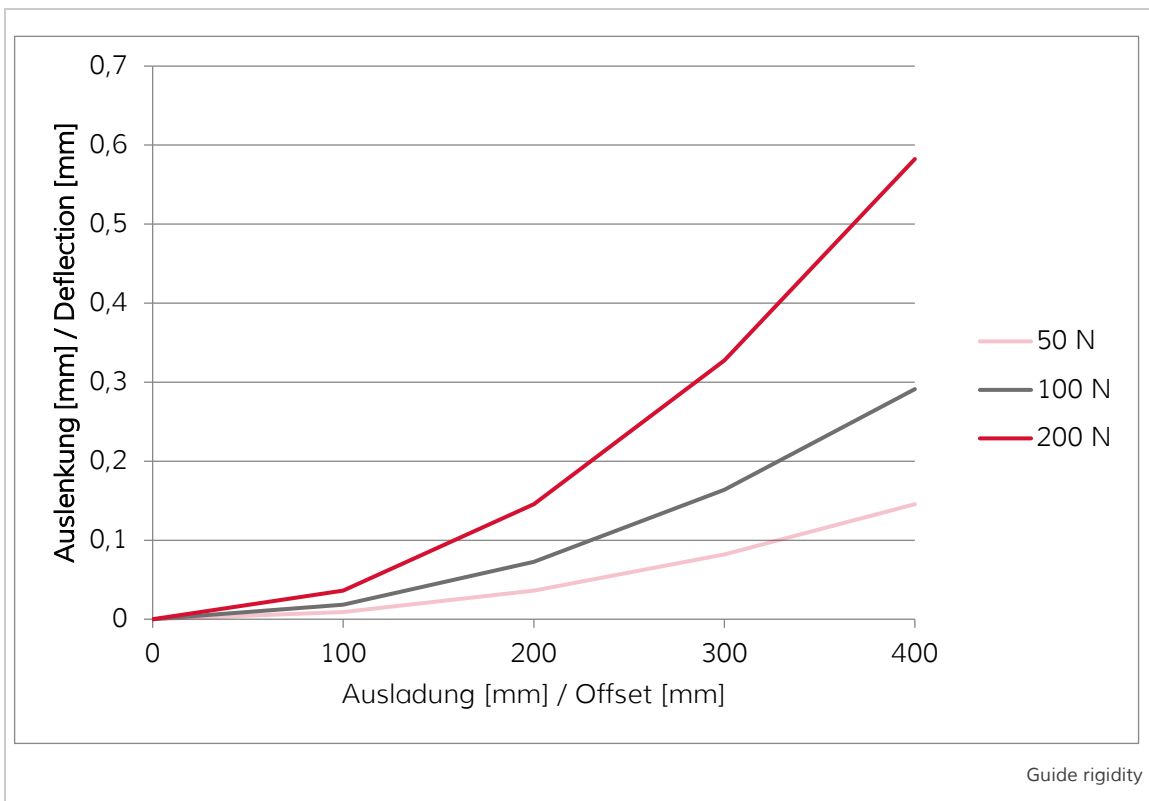


Measured variable	Slide (300 mm)	Slide (470 mm)
Max. torque M_x	625 Nm	1000 Nm
Max. torque M_y	95 Nm	95 Nm
Max. torque M_z	625 Nm	1000 Nm
Load-bearing capacity C1	2500 N	2500 N
Load-bearing capacity C2	1000 N	1000 N



A Offset

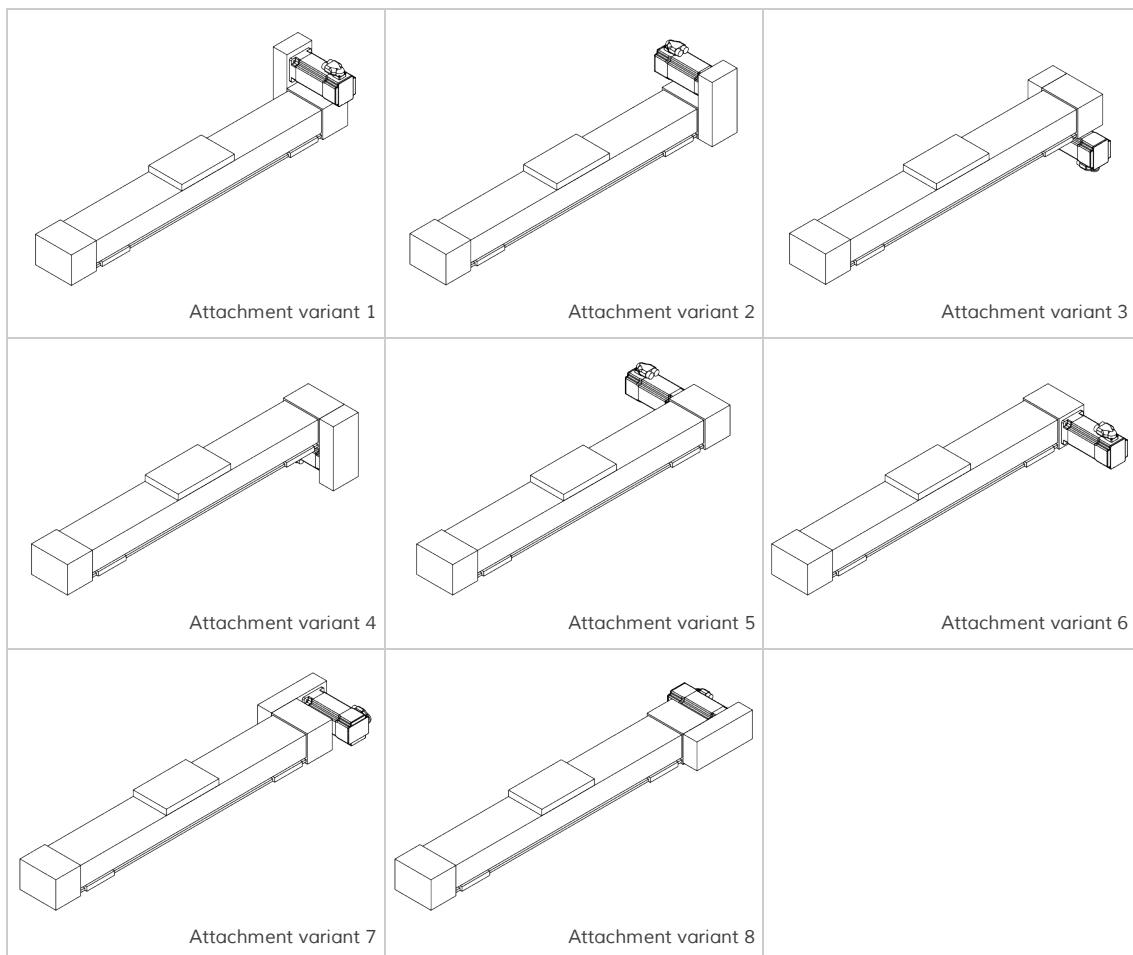
B Deflection (M_y)



4.4 Connecting the motor

Motors can be attached either via an axial flange or via a belt drive. Different attachment variants and transmission ratios can be selected.

- ▶ For the dimensions of the motor attachment variants see the Appendix.
- ▶ Connect motors as specified in the motor data sheet provided by the manufacturer.




4.5 Mounting the energy chain

For all cables that also move, suitable energy chains must be used to prevent cable break. When mounting the energy chains ensure the following:

- Minimum radius (r_{min}) of energy chains for IEF Werner cables:
 $r_{min} \geq 10 \times \text{cable diameter}$.
- Within the energy chain reserve 30% free space.
- Attach strain-relief elements for cable on the output of the energy chain.
- If other cables (cables that are not IEF-Werner cables) are used: Comply with EN 60204.
- Recommendation: Use cables and energy chains from IEF-Werner.

5 Fault rectification

The fault rectification measures described here are assistance measures intended exclusively for specialists. Contact the manufacturer's Service organisation, if necessary.

 CAUTION	
<p>Warning – personal injury!</p> <p>Failure to comply with the safety regulations may result in injury.</p> <ul style="list-style-type: none"> ▶ Fault rectification measures must only be carried out by specialists. ▶ Before all tasks on the product de-energise the electric drive and safeguard it from being switched on. ▶ If the components are purchased parts, the documentation of the respective purchased part must be complied with before tasks are carried out. 	

5.1 Fault – increased running noise

Assembly	Reason	Fault rectification
Guide slide	Nominal service life exceeded	▶ Replace guide slide.
	Worn due to overload (excessive torques, etc.)	▶ Replace guide slide. ▶ Reduce load.
	Worn due to heavy contamination	▶ Replace guide slide. ▶ Clean and regrease guide rails more frequently. ▶ Protect linear unit from contamination.
Guide rails	Worn	▶ Replace guide rails. ▶ Replace guide slide. ▶ Check load.
	Corroded	▶ Replace guide rails. ▶ As needed: Replace guide slide.
Deflector unit	Worn	▶ Replace deflector unit.
Drive set	Worn	▶ Replace drive set.

Assembly	Reason	Fault rectification
Toothed belt	Runs dry	▶ Lightly grease toothed belt on the toothed side.
	Runs slanted	▶ Align toothed belt on the belt fastener (thrust piece and toothed segment), tighten M6 cylinder screws uniformly.
	Toothed side is heavily contaminated	▶ Clean toothed belt and replace it if necessary. ▶ Protect linear module from contamination.
	Defective	▶ Replace toothed belt.
Motor	Motor (motor bearing) defective	▶ Comply with the supplier documentation provided by the motor manufacturer. ▶ Replace motor.
	For motor with brake: Brake does not release	▶ Comply with the documentation provided by the motor manufacturer, and if permissible energise the brake.

5.2 Reversal play / position loss

Assembly	Reason	Fault rectification
Toothed belt of the gear unit	Not tensioned	▶ Tension the gear unit toothed belt.
Toothed belt of the drive	Not tensioned	▶ Tension the toothed belt of the drive.

5.3 Slide / linear unit



Slide / linear unit does not move

Assembly	Reason	Fault rectification
Limit switches	Limit switch cable not connected / defective	▶ Connect / check cable.
	Defective	▶ Replace limit switch.
Plug socket	Solder connection on the plug socket has detached	▶ Solder stranded wires.
Motor	Incorrectly connected	▶ Check connection pin assignment and change if necessary.
	Motor defective	▶ Replace motor
	Motor cable defective	▶ Check motor cable, replace cable if necessary
	For motor with brake: Brake does not release	▶ Comply with the manufacturer's documentation. If necessary energise brake as specified in this documentation.
Power electronics / controller	Fault in the power electronics / controller	▶ Check power electronics / controller.
Belt drive	Toothed pulley slips	▶ Tighten the clamping set and secure screws with screw locking varnish.
Planetary gear:	Clutch between motor and planetary gear slips	▶ Tighten clutch and screws with screw locking paint.

At reference run slide / linear unit moves mechanically to the stop

Assembly	Reason	Fault rectification
Motor	Wrong direction of rotation	▶ Change direction of motor rotation.
	Cable break – motor cable	▶ Replace cable.
Reference switch	Reference switch / cable is defective	▶ Replace reference switch / cable.
	Reference switch has slipped / is lost	▶ Readjust / remount reference switch.

6 Service, maintenance, and repair

 WARNING
<p>Warning – personal injury due to electric shock!</p> <ul style="list-style-type: none"> ▶ The tasks described here must only be performed by instructed personnel (service) or specialists (maintenance and repair). ▶ Before all tasks on the product: De-energise the system and safeguard it from being switched on.
 CAUTION
<p>Risk of burns due to hot surfaces!</p> <p>The motor housings can heat up and cause burns when touched.</p> <ul style="list-style-type: none"> ▶ Allow the motor housings to cool down before maintenance tasks.
ATTENTION
<p>Material damage!</p> <ul style="list-style-type: none"> ▶ Do not use any greases that contain ester oils.
ATTENTION
<p>Material damage!</p> <p>The maintenance intervals are recommendations that can be shortened by the owner based on experience gained from maintenance tasks and local conditions.</p> <ul style="list-style-type: none"> ▶ Shorten maintenance intervals if necessary.
ATTENTION
<p>Possible damage to workpieces and machine due to worn components!</p> <p>The machine and the components contained therein are designed and dimensioned in such a manner that functional reliability is guaranteed over a long period of time. Nevertheless, components can wear out or be damaged at an early stage.</p> <ul style="list-style-type: none"> ▶ To avoid damage, replace worn and damaged components immediately! ▶ Use only original spare parts or series production parts expressly approved by the manufacturer.

6.1 Cleaning

- ▶ Clean the guide rail with a soft cloth as needed. All cleaning media that is gentle on the material are suitable.

6.2 Maintenance

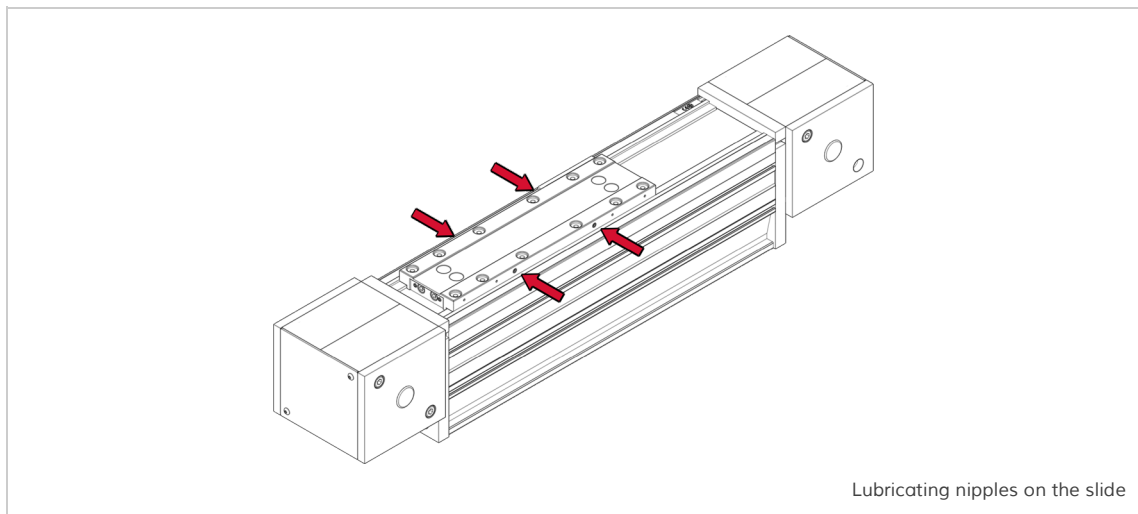
Roller element units

All roller element units are factory-equipped with lifetime lubrication.

Guide slide

► Grease the guide slide according to the following table.

Interval	Every 5,000 km
Lubricating point	4 lubricating elements on the slide The slide has a total of 4 lubricating nipples. The opposite lubricating nipples are connected through bores, consequently only one side (2 lubricating nipples) must be lubricated.
Lubricant quantity	3 x 0,7 cm ³ After every lubrication the slide must be moved, so that the lubricant spreads.
Grease	Dynalub 510
Tool	Grease gun (art.-no.:1055123)



Lubricating nipples on the slide

7 Appendix

7.1 Parts List – Linear unit Module 115/25 (TG1003321)

See the Appendix for the associated drawing.

Position	Part number	Designation	Spare part / wear part
10	TG1003323	Base body	
20	TG1003322	Ball rail guide	x
30	TG1003324	Strip & slide guide cpl.	
40	1146834	Drive set cpl.	x
50	1133982	Gear unit half	
60	1133988	Gear unit cover	
70	1133985	Bearing cover	
72	1148069	Bearing cover switch	
80	1133984	Cover – gear unit housing	
90	907969	Fillister head screw	
100	626043	Cylinder screw	
110	626620	Cylinder screw	
120	626244	Cylinder screw	
130	626043	Cylinder screw	
135	626251	Cylinder screw	
140	1118738	Rubber-metal buffer 15x13	
150	626340	Cylinder pin	
155	626338	Cylinder pin	
160	1134028	Slide parts cpl.	
170	1134029	Slide plate 300	
175	1145994	Slide plate 470	
180	1133990	Sliding block 115/25	

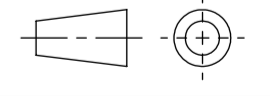
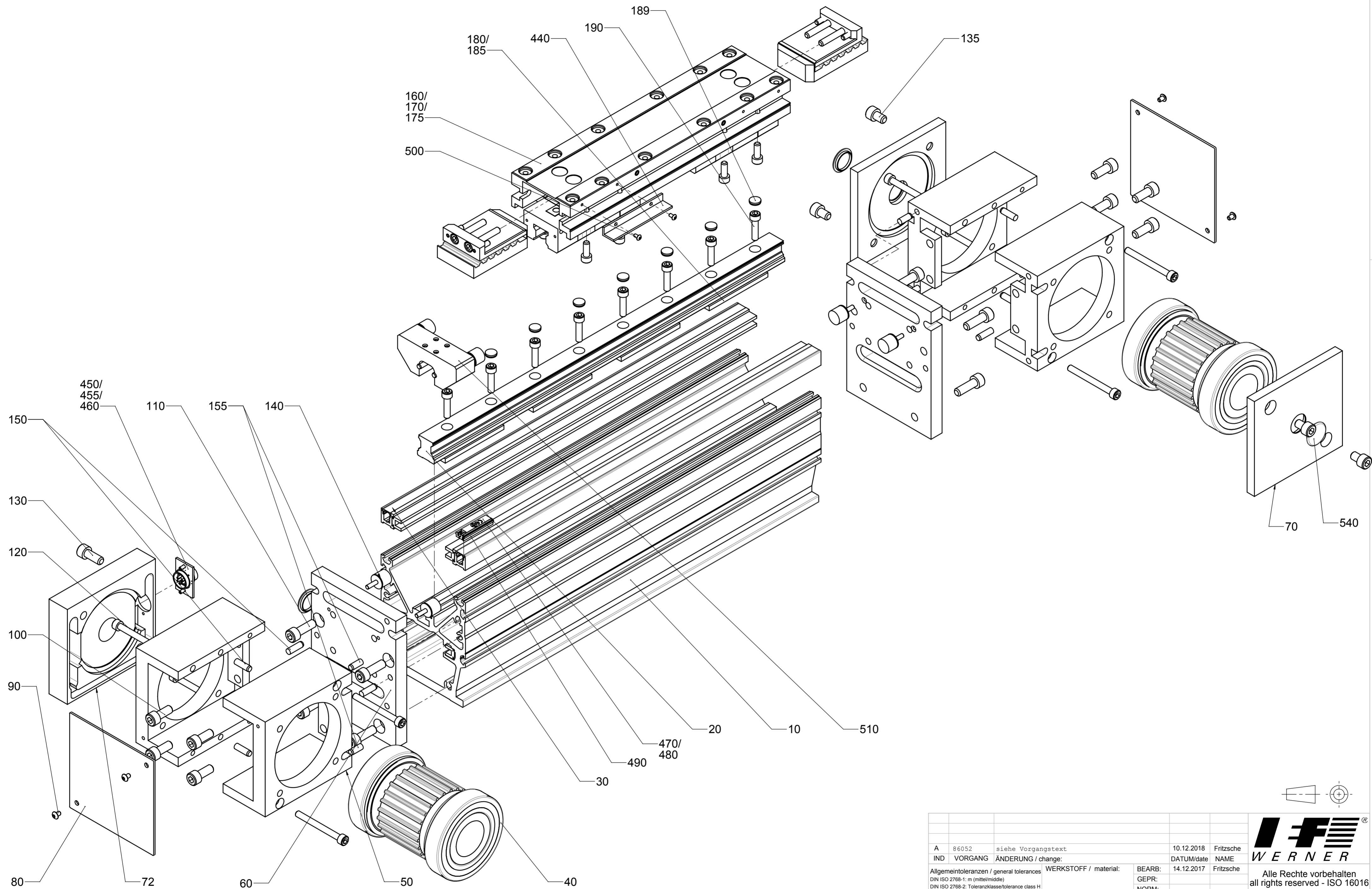
Position	Part number	Designation	Spare part / wear part
185	1133991	Sliding block module 115/25 short	
186	1134208	Toothed belt	x
187	1134208	Toothed belt	x
189	1150649	Sealing cap	
190	1144457	Cylinder screw	
200	1134023	Axial flange PLE80/90	
210	1134025	Axial flange PLE120/115	
220	1134048	Compensating coupling	
230	1134050	Compensating coupling	
240	626037	Cylinder screw	
250	626620	Cylinder screw	
260	1148068	Gear unit housing	
265	1424692	Toothed washer St 40 AT10/30-0	x
270	1134012	Toothed washer St 40.0 AT10/30-2	x
280	1134013	Toothed washer St 40.0 AT10/30-2	x
290	1134017	Gear unit slide-in lid	
300	1134016	Cover – belt drive	
310	1134046	Toothed belt	x
320	732294	Clamp set	
325	732294	Clamp set	
330	734168	Clamp set	
340	28574	Gate for easyLINE	
350	1002404	Fillister head screw	
360	626043	Cylinder screw	
370	626036	Cylinder screw	
380	1134047	Cylinder pin	


Position	Part number	Designation	Spare part / wear part
390	1144369	Drive shaft PA belt drive	
395	1144362	Drive shaft PA axial flange	
400	1144629	Compensating coupling	
410	1125423	Compensating coupling	
420	1021466	Aluminium tube ALMgSi 0.5 anodised	
425	1021466	Aluminium tube ALMgSi 0.5 anodised	
430	1123878	Bevel gear	
440	1133994	Activator bracket	
450	25626	Holding plate	
455	1095649	Panel plug M12, 5-pin cpl.	
460	725163	Panel plug round	
470	25165	Inductive switch PNP-NC contact	
480	726744	Inductive switch PNP-NO contact	
490	28585	Limit switch holder	
500	626027	Fillister head screw	
510	1134056	Stopper cpl.	
520	1144708	Clutch	
530	1144709	Clutch	
540	732284	Plastic cover D=25/20.5 black	

7.2 Parts List – Slide Parts (1134028)

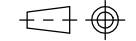
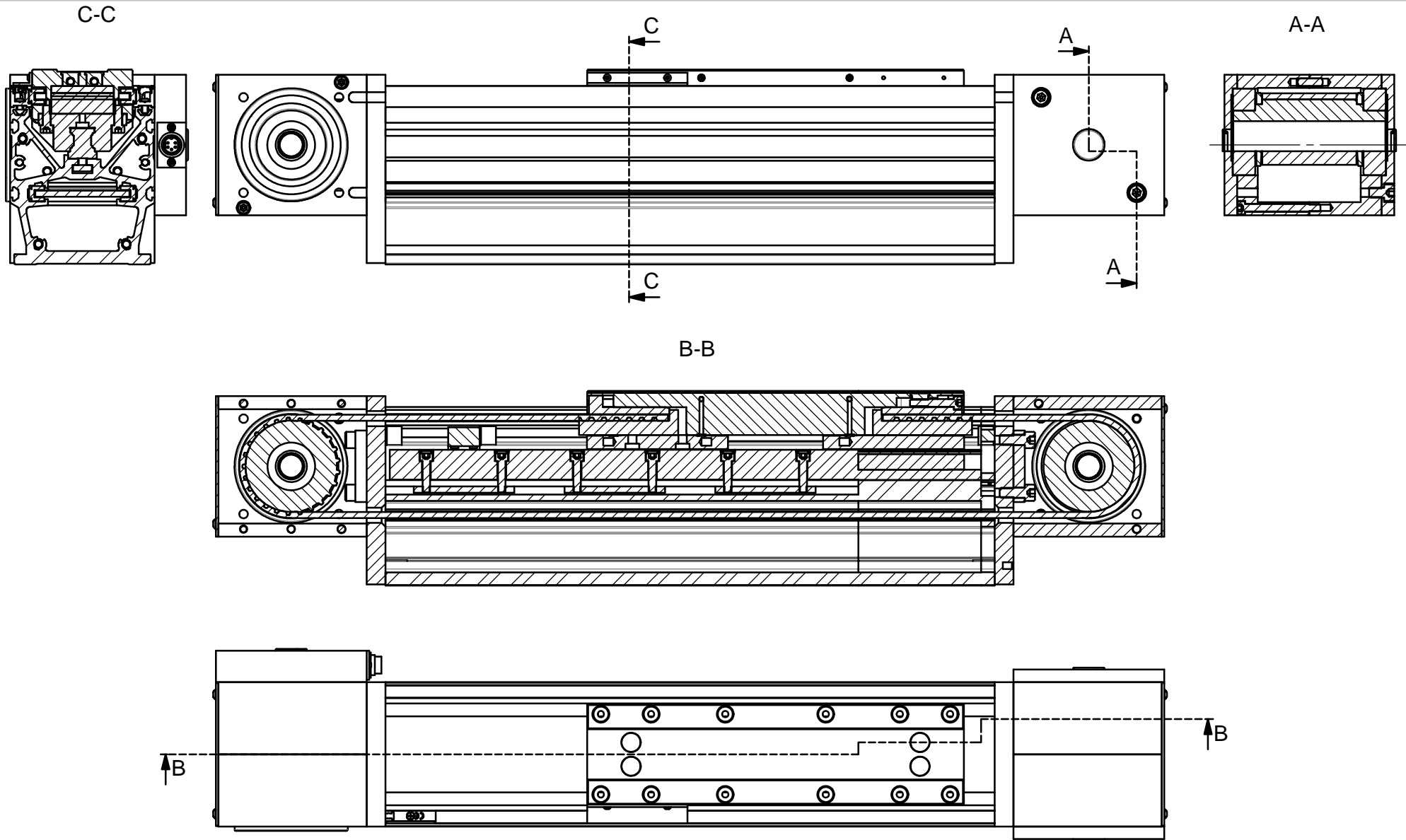
See the Appendix for the associated drawing.

Position	Part number	Designation	Spare part / wear part
20	1133992	Thrust piece	
30	1133993	Tooth segment	
40	1023942	Threaded bush	
50	1148493	Ball slide	x
60	1028704	T. lubricating nipple	
70	626056	Cylinder screw	
80	626049	Cylinder screw	
90	626186	Grub screw, hex socket and flat point	
100	1007437	O-ring - NBR - 70° Shore A	
20	1133992	Thrust piece	
30	1133993	Tooth segment	



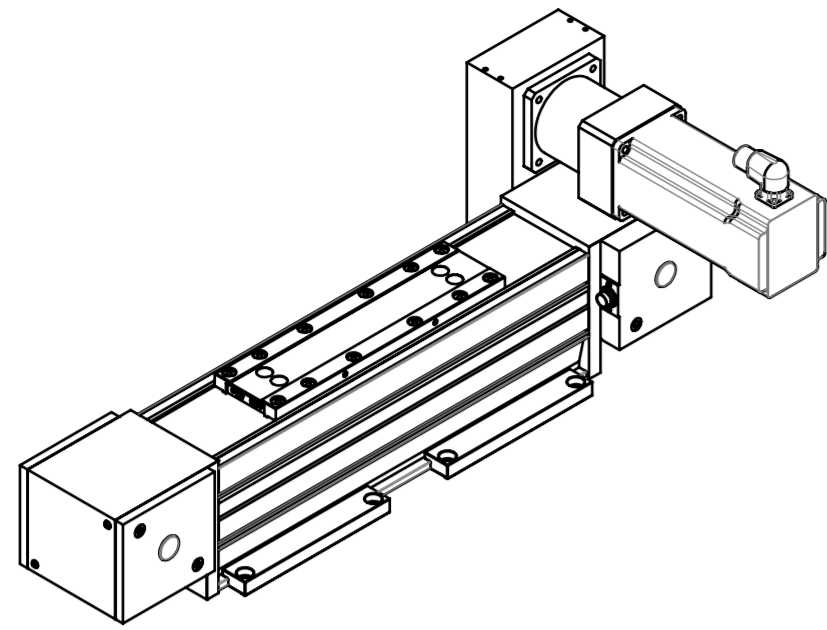
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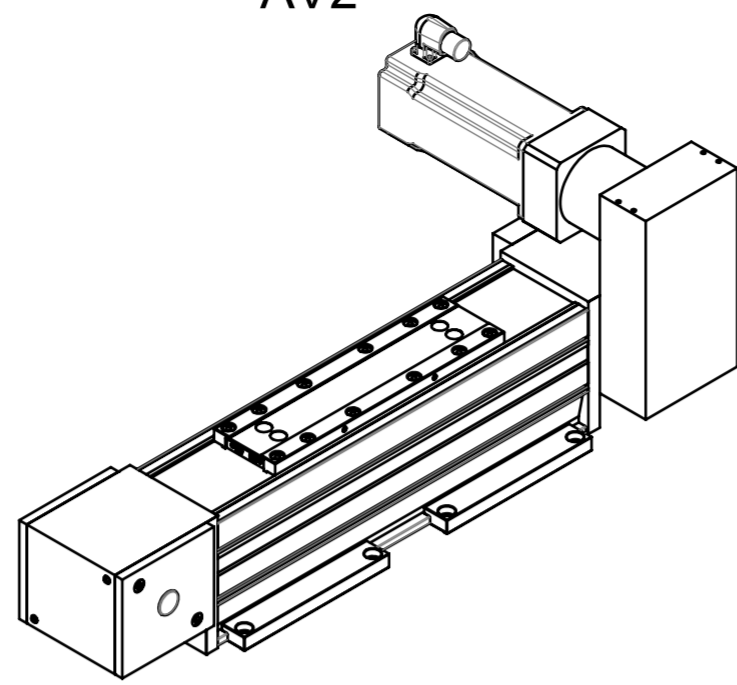


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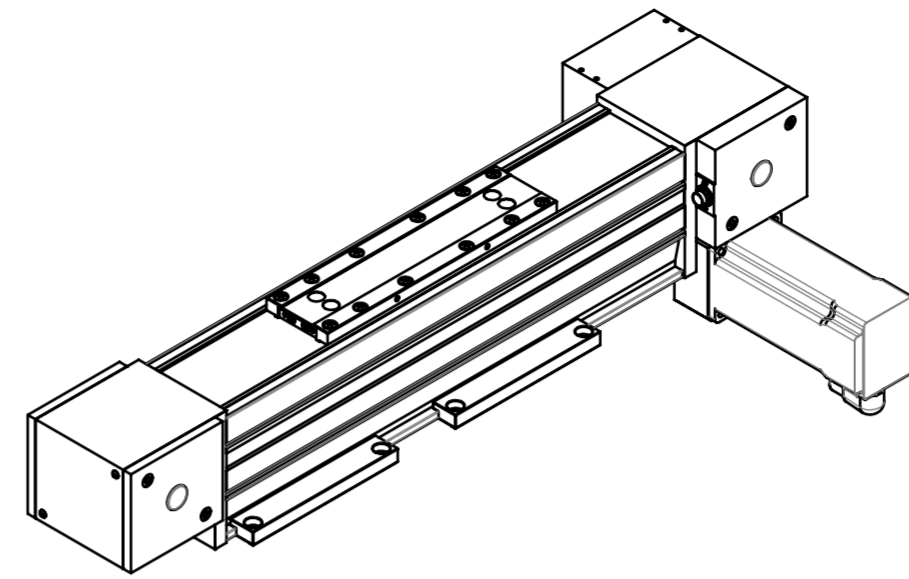
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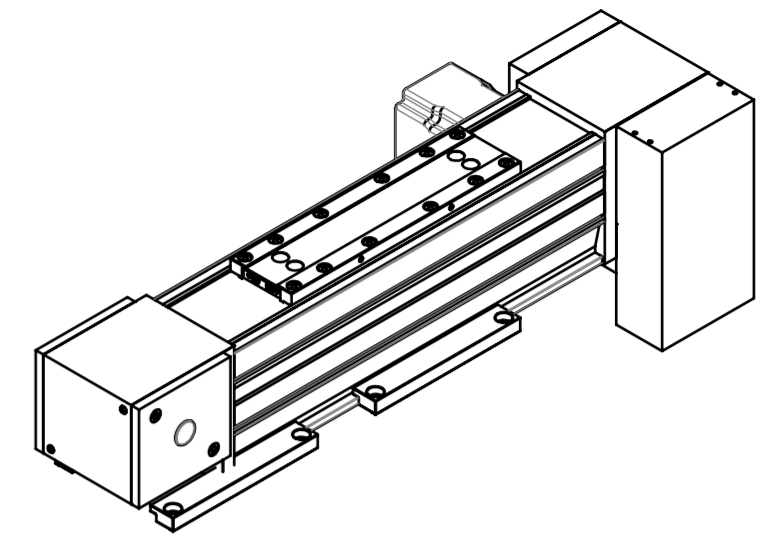
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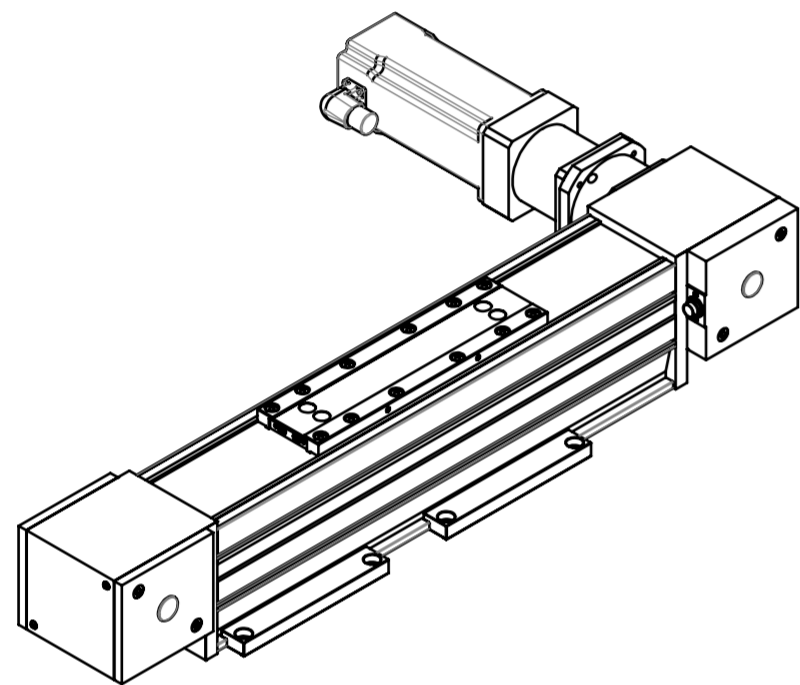
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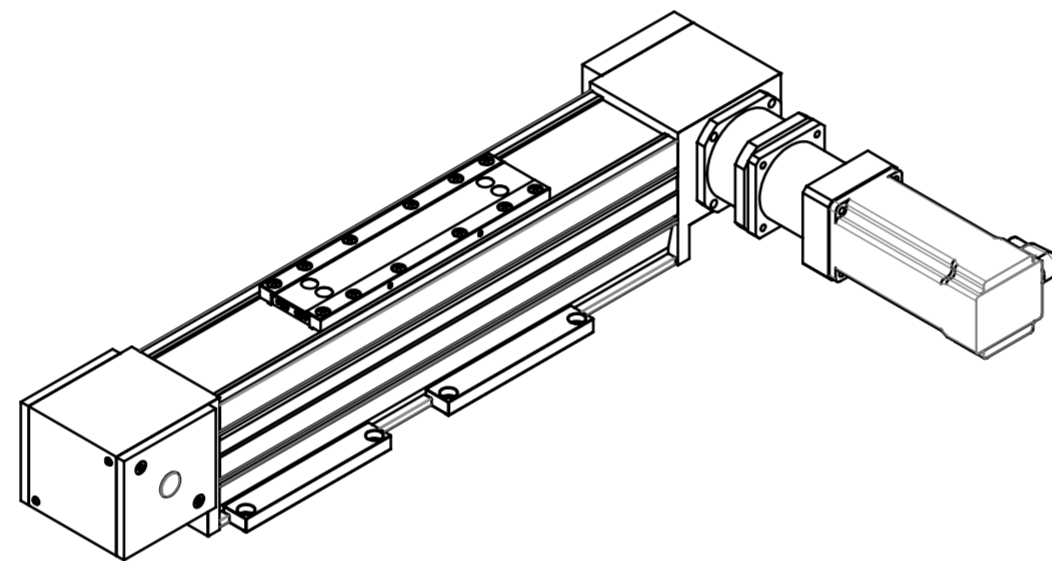
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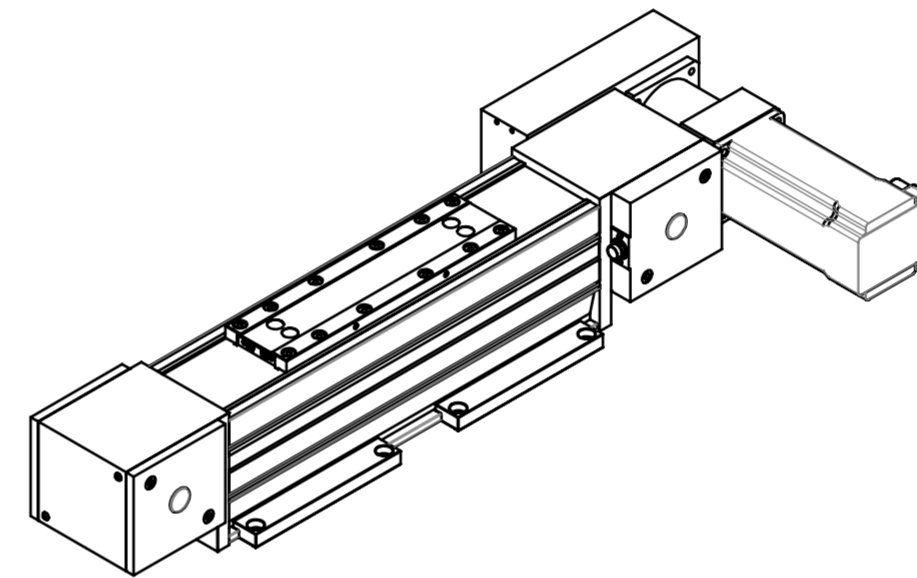
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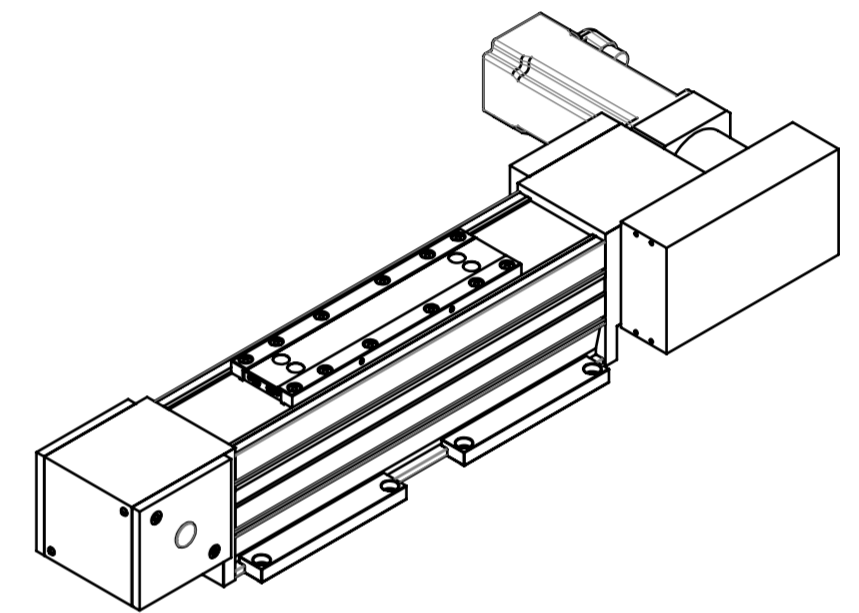
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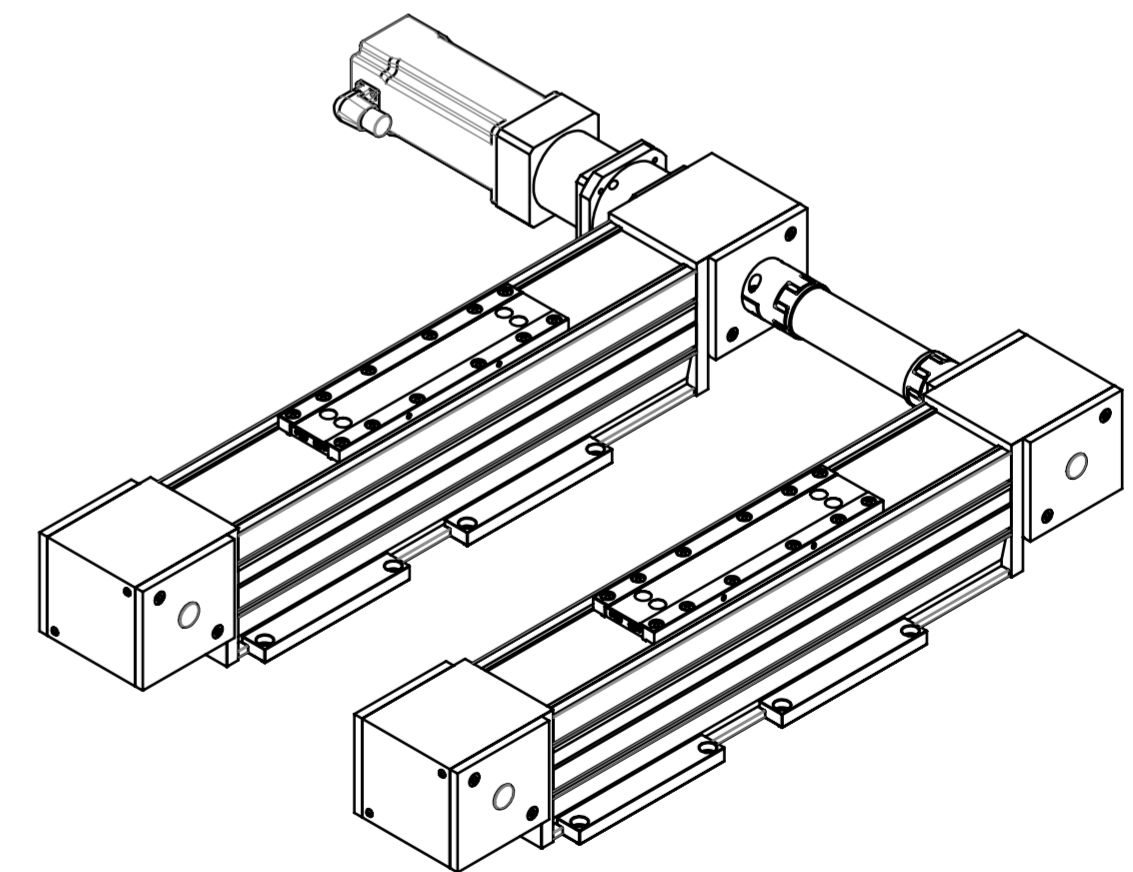
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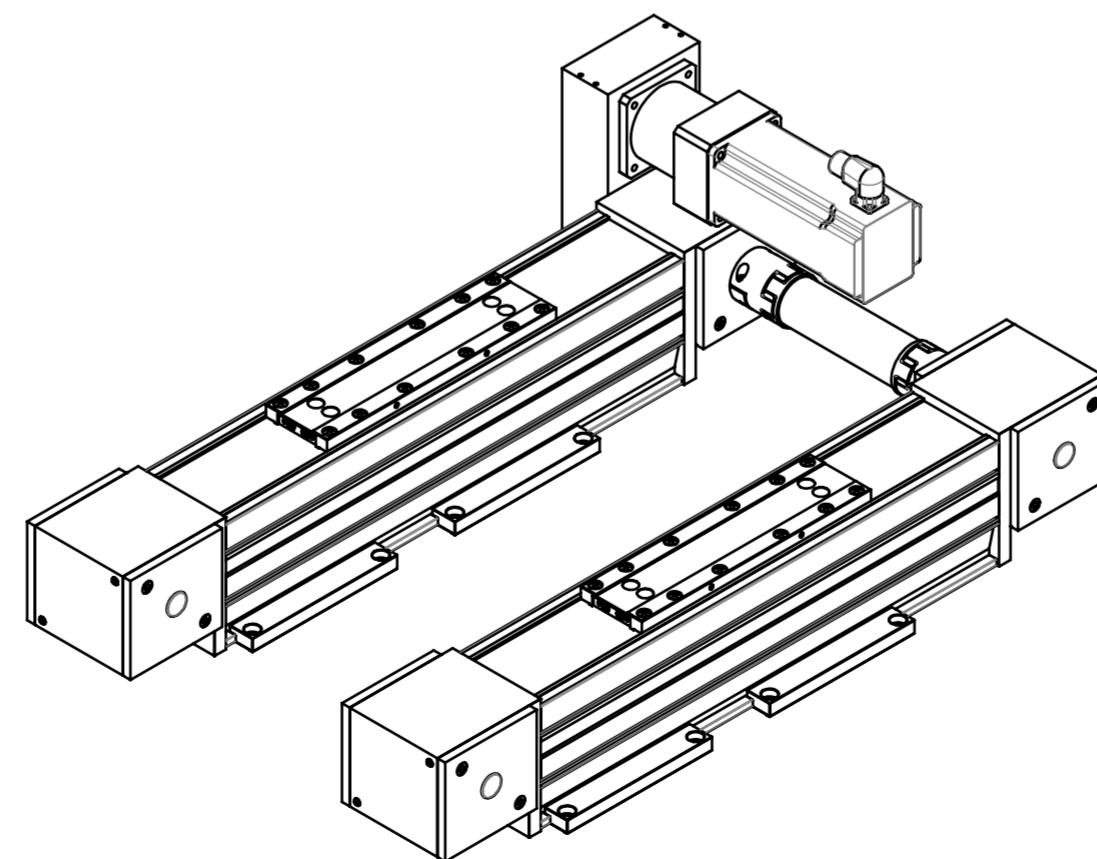
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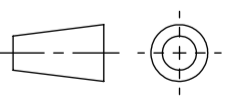
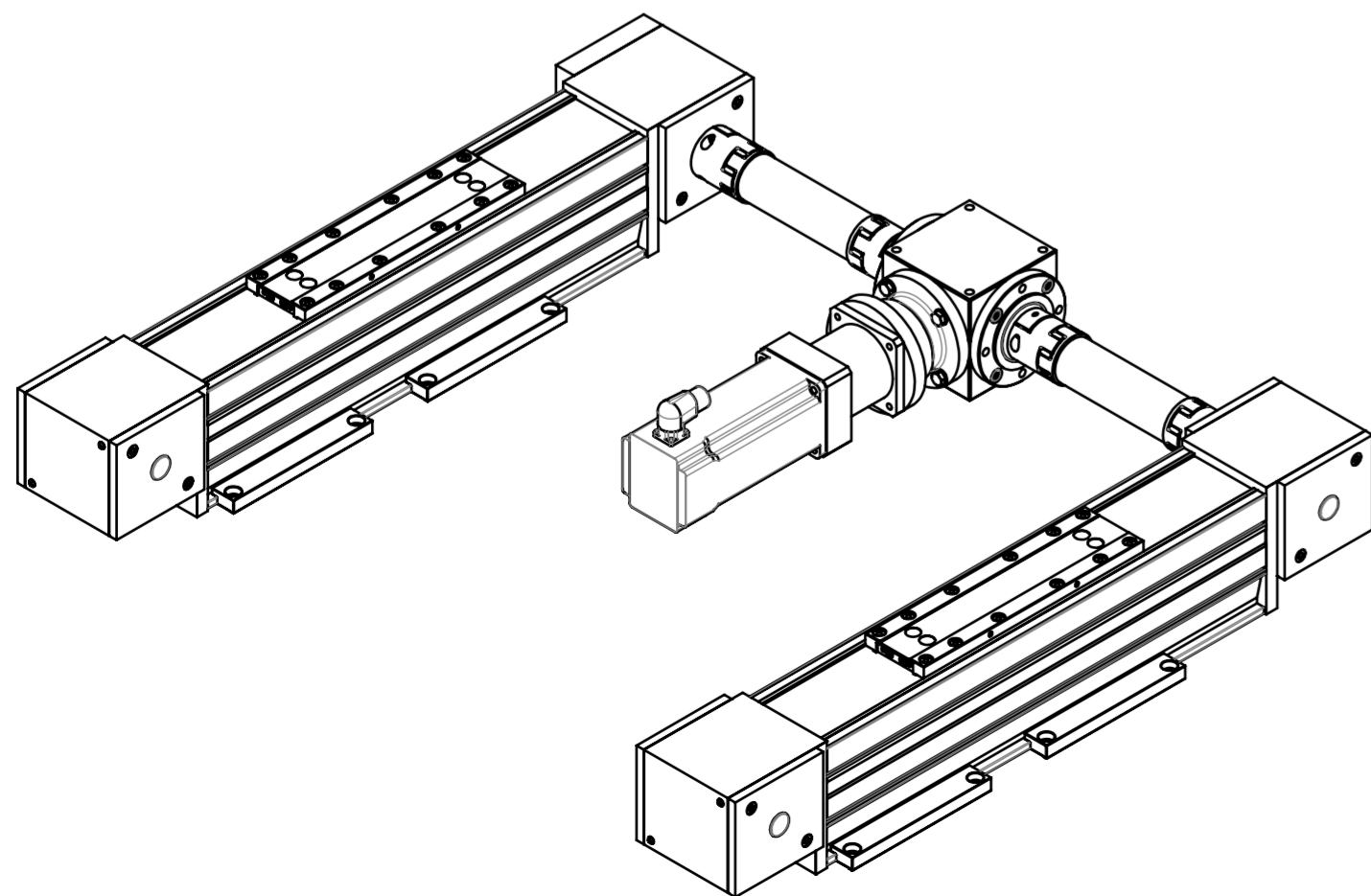
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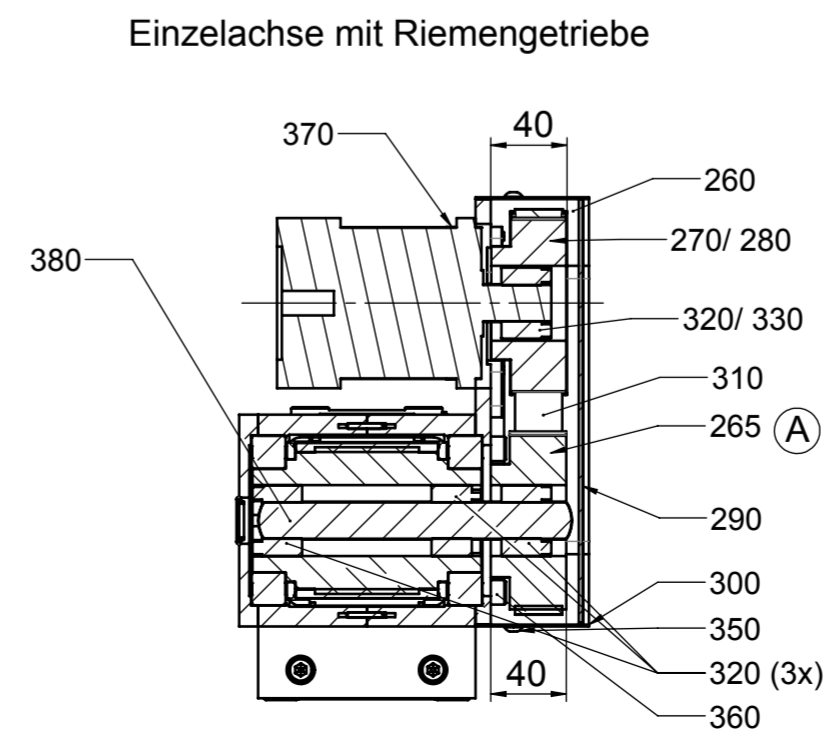
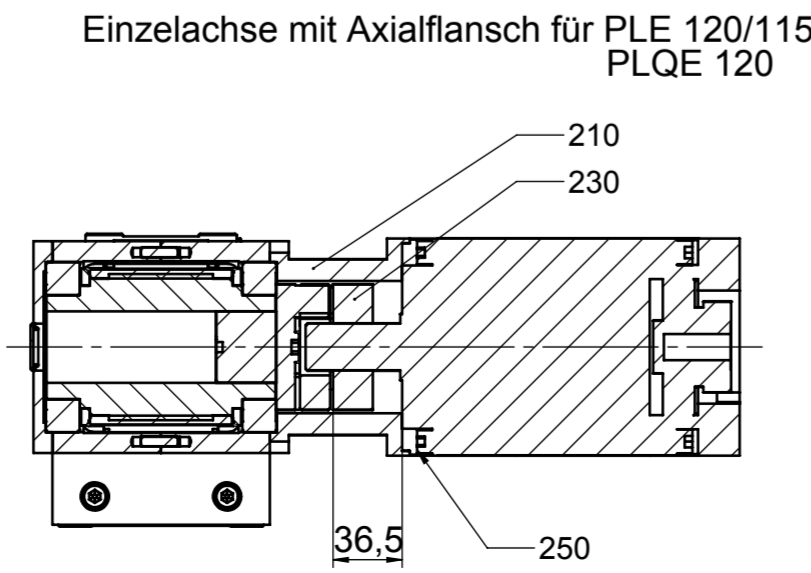
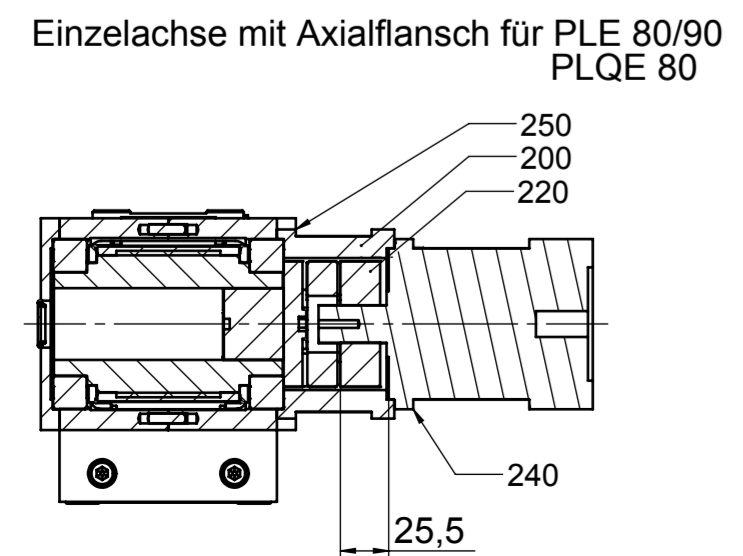
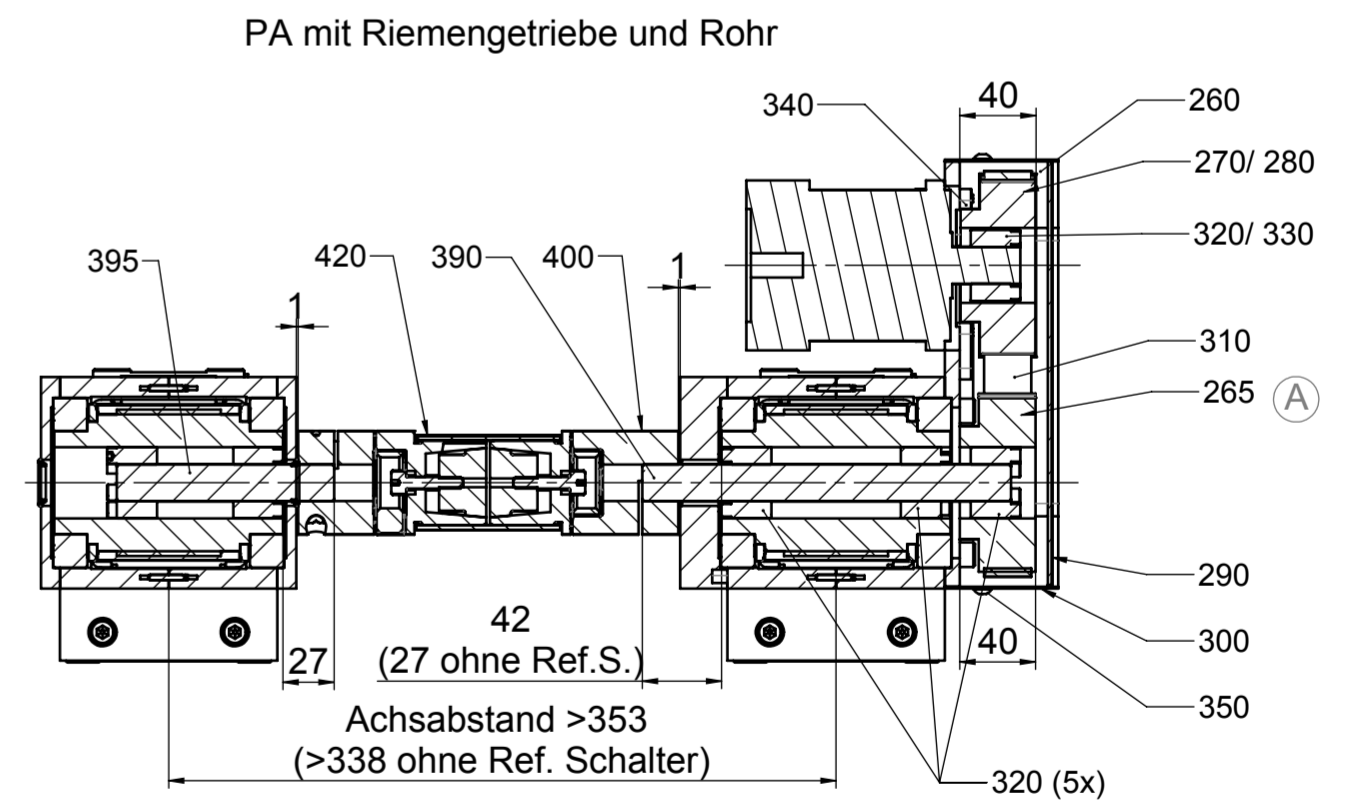
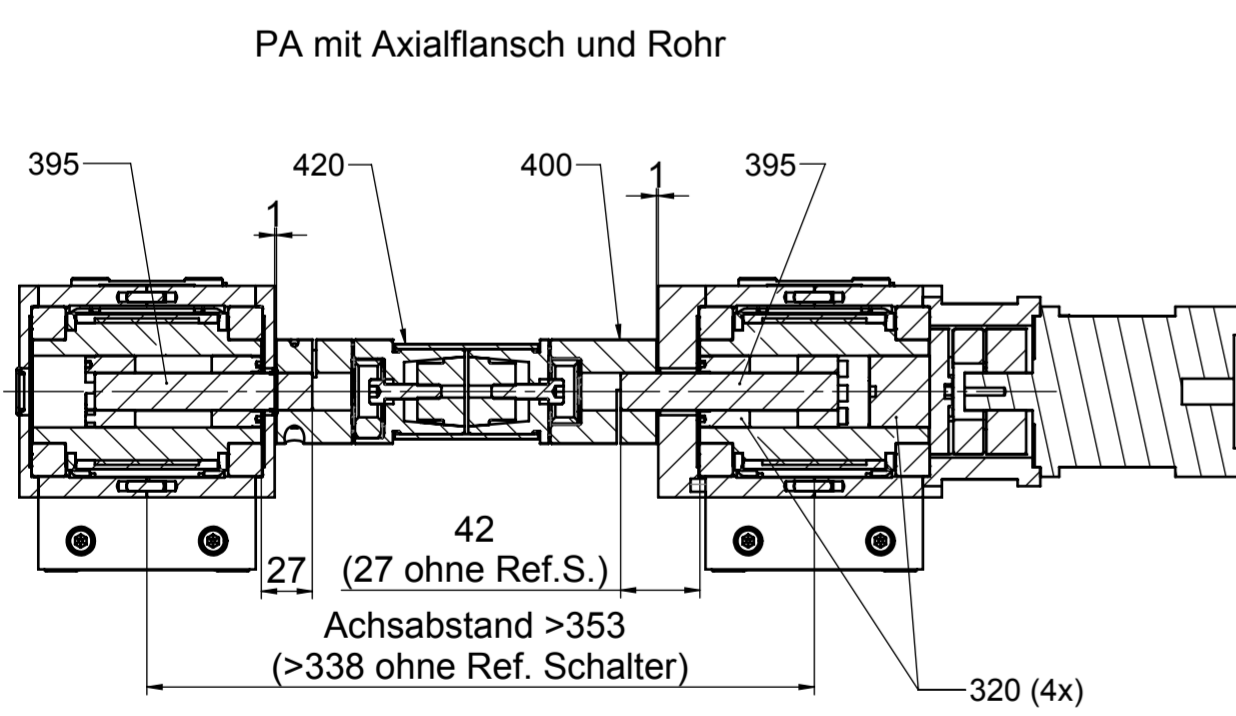
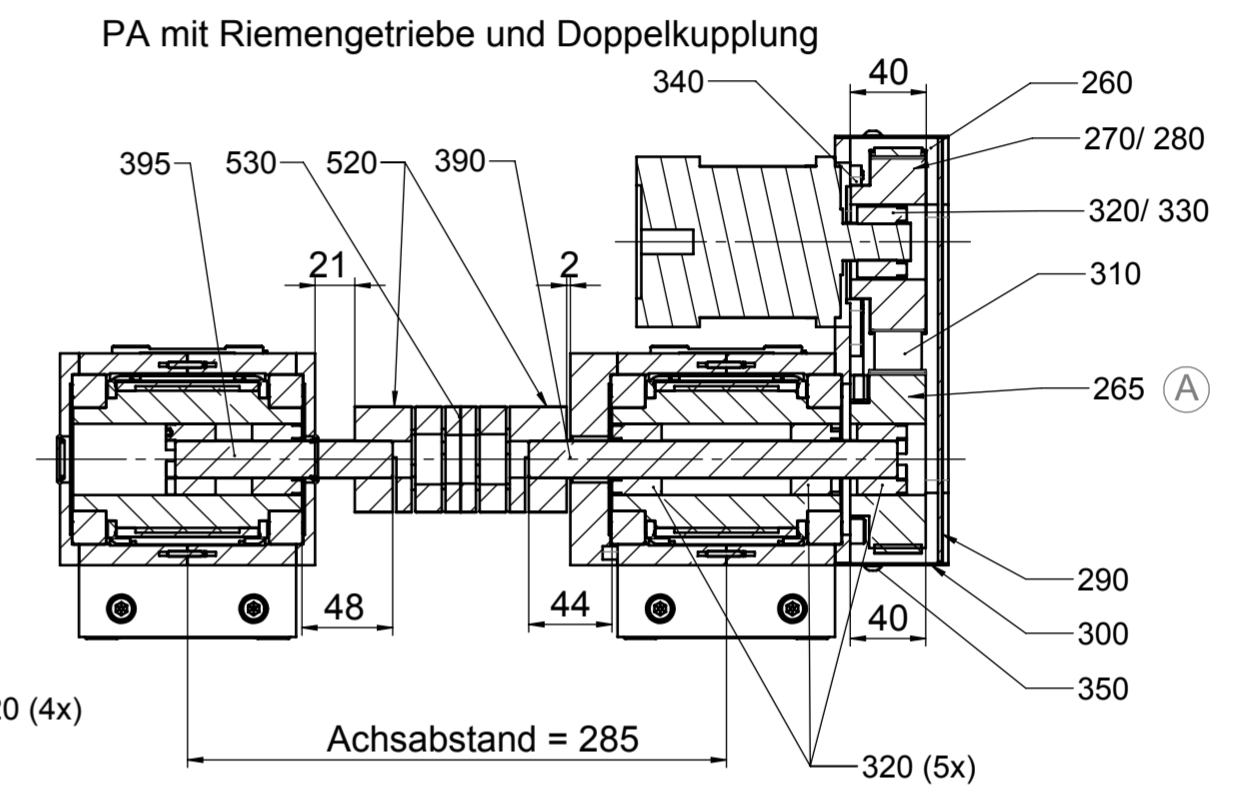
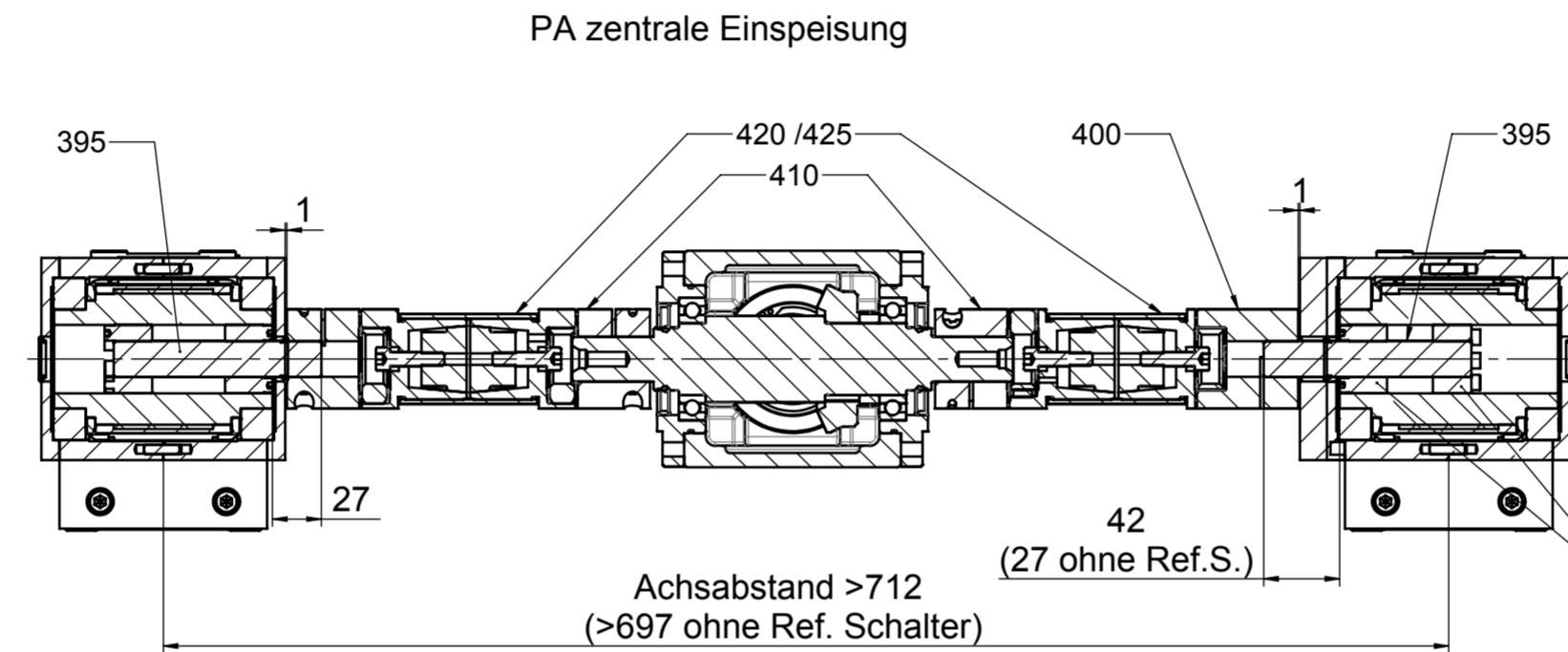
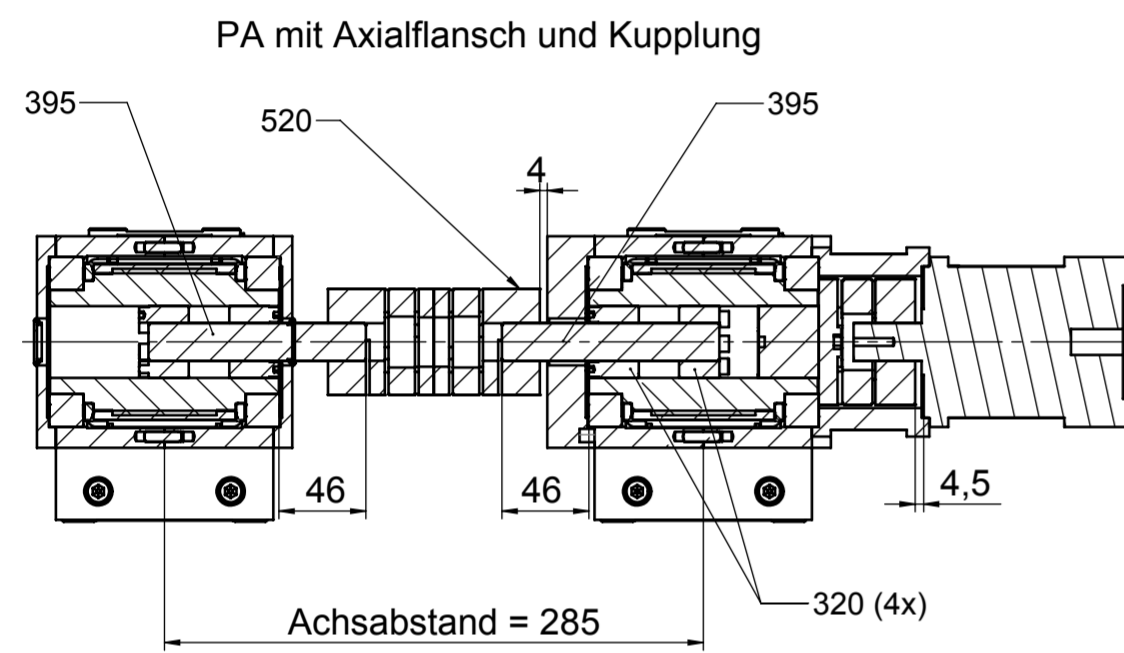
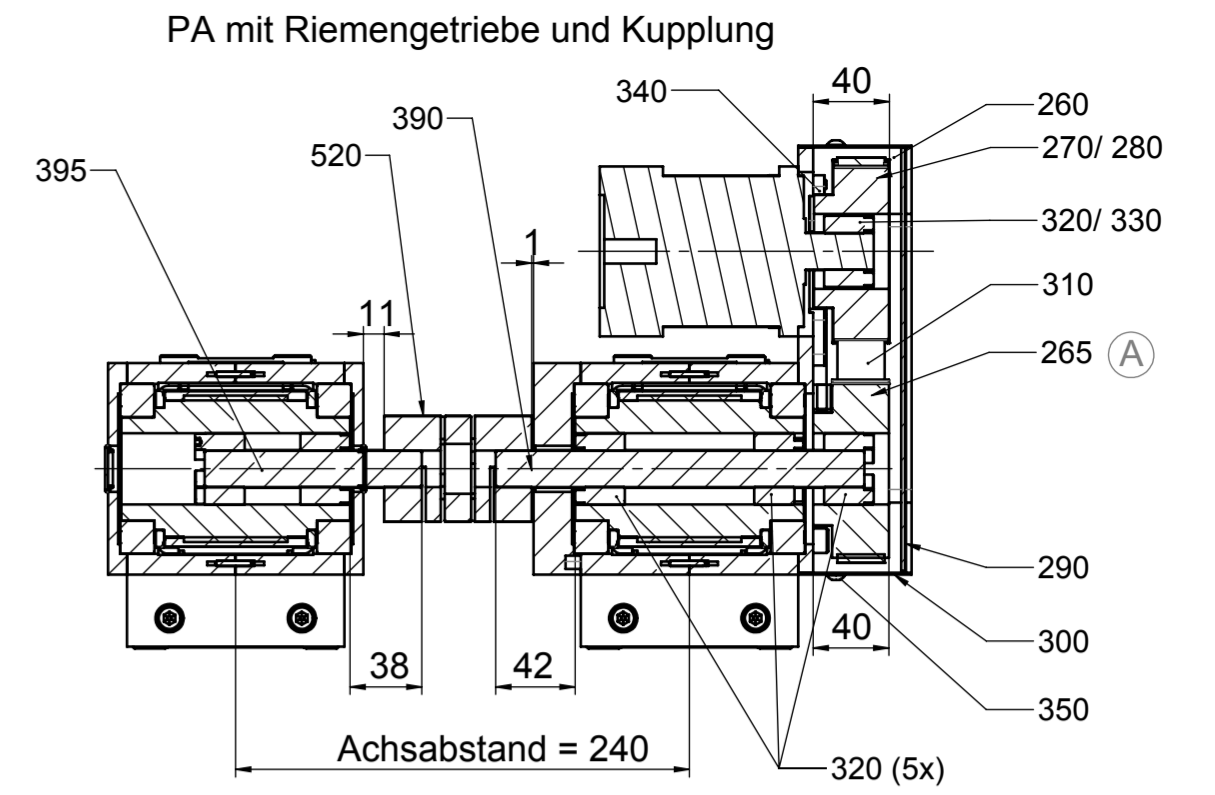
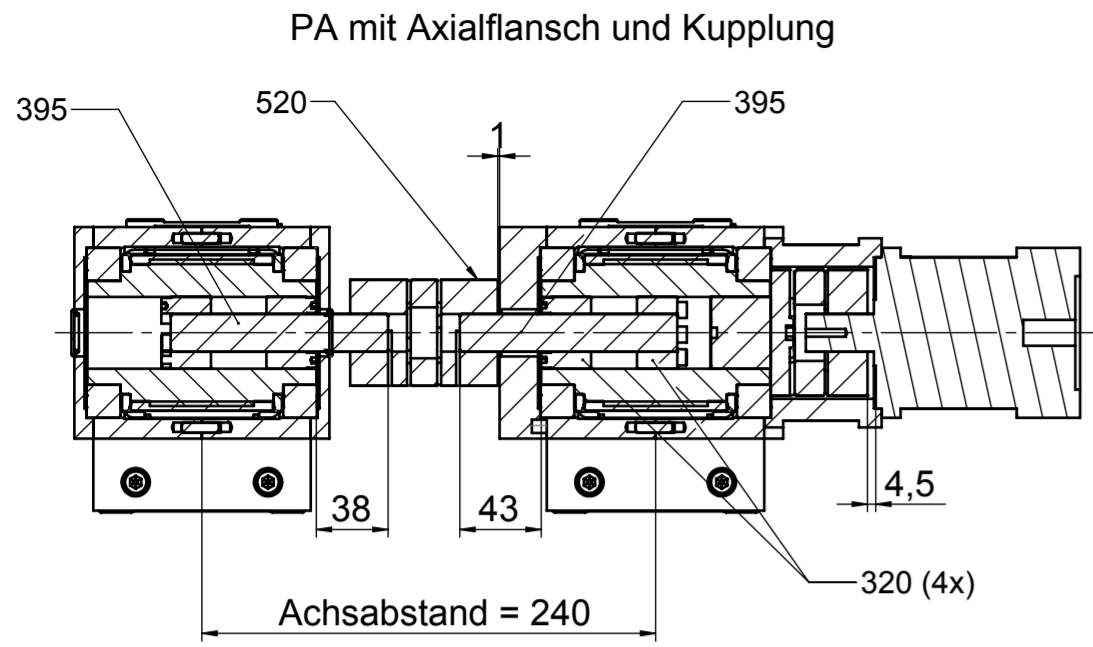


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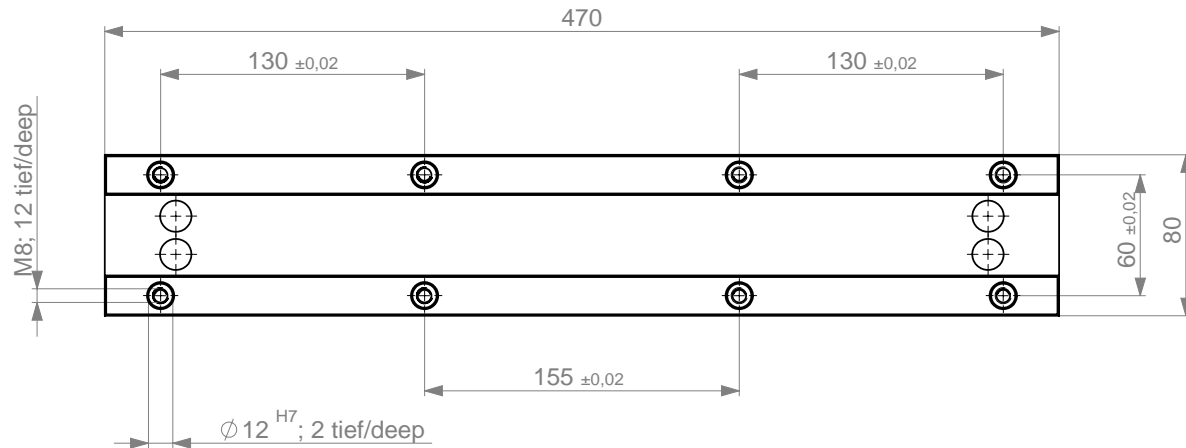
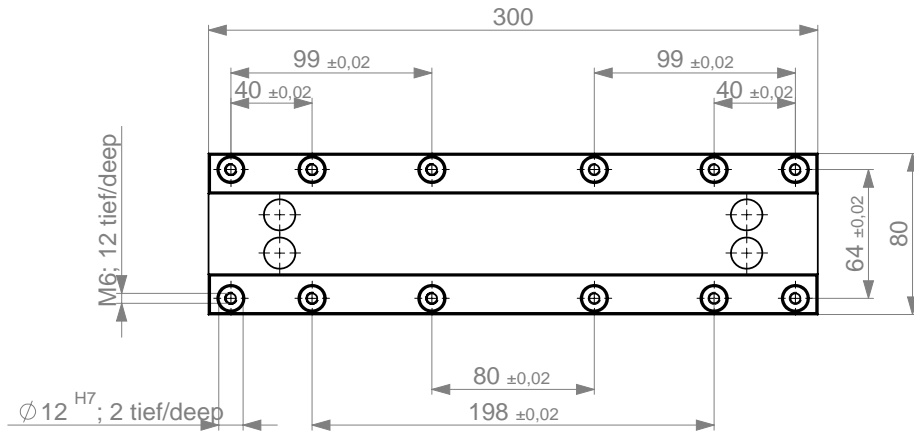
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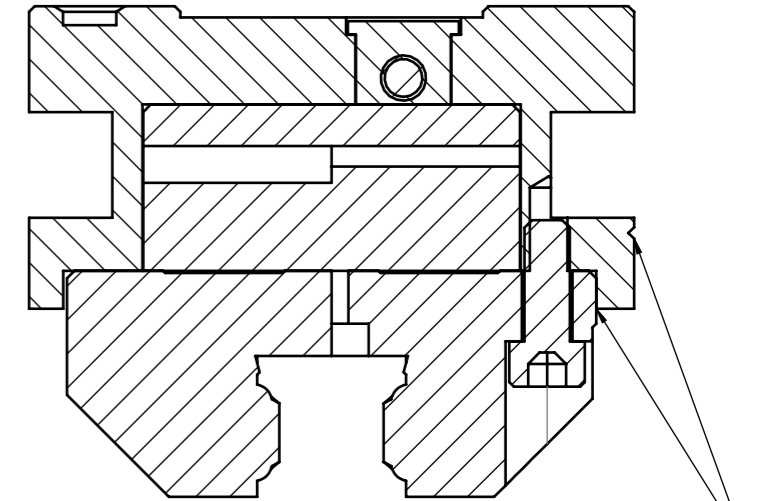
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Modul 115/25 Schlittenvarianten | Module 115/25 slide variants

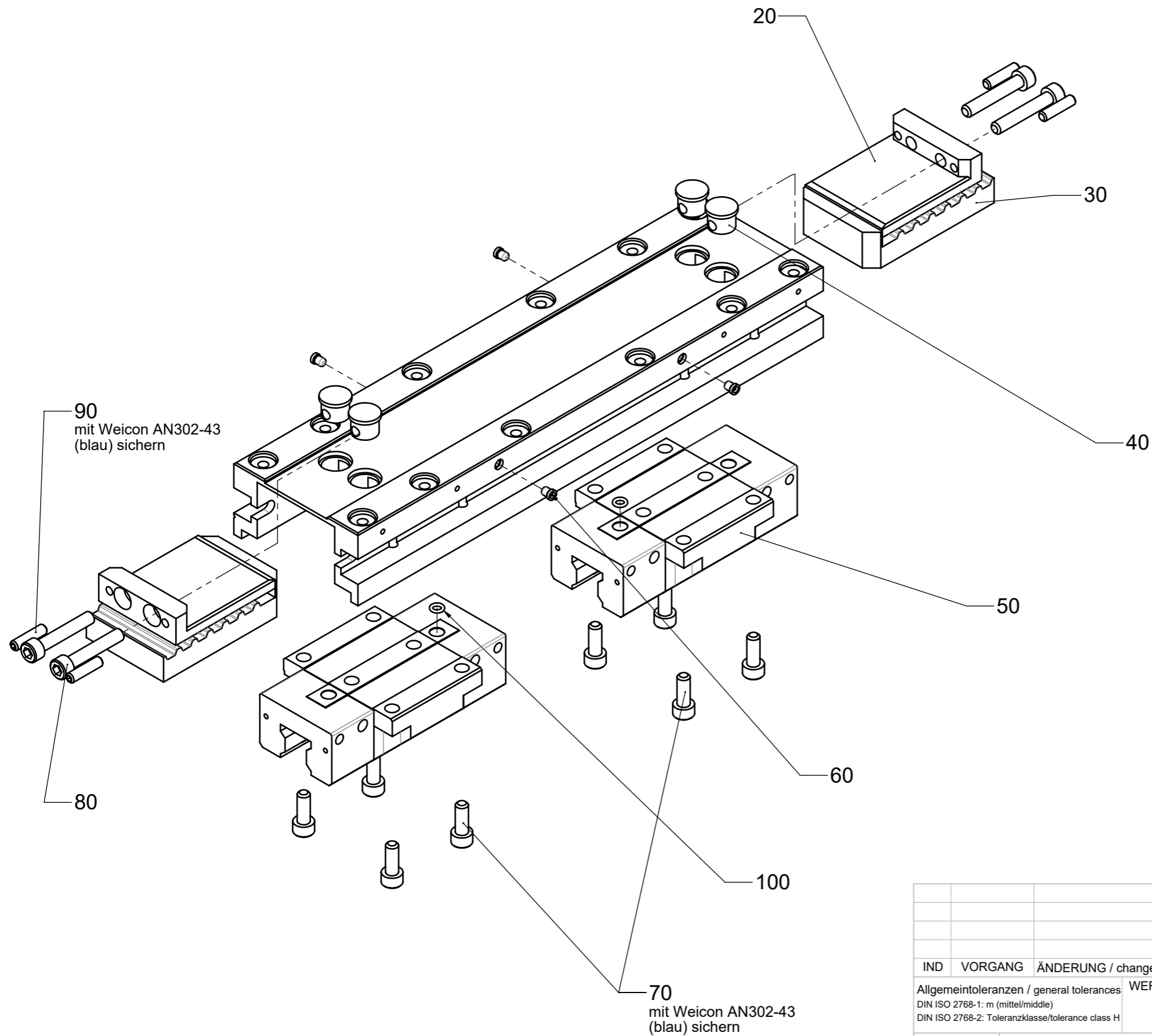
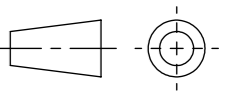
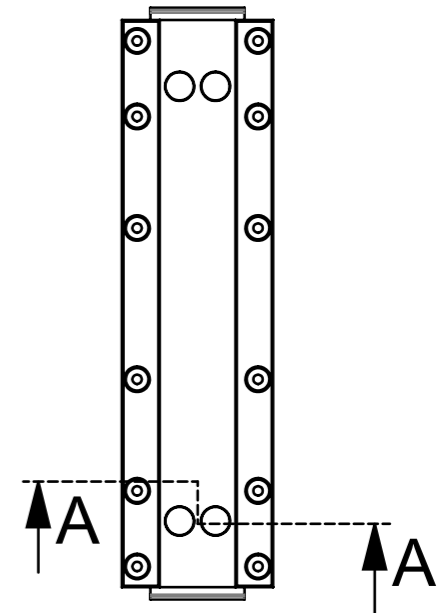



A-A



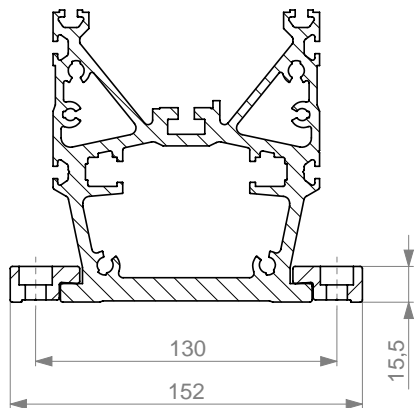
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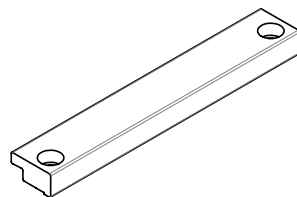


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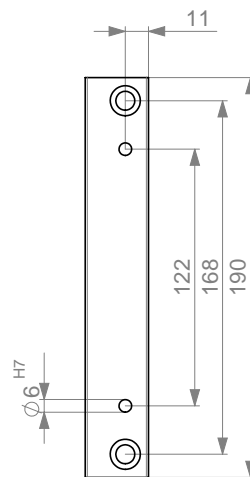
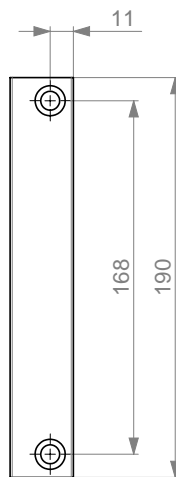
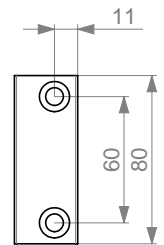
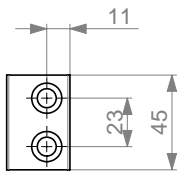
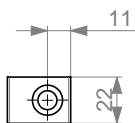
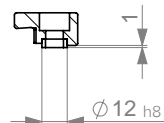
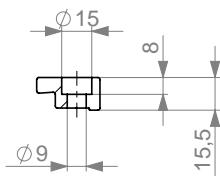
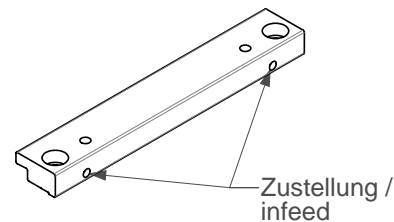
Modul 115/25 Spannelemente | Module 115/25 clamping elements



Spannelement standard /
clamping element standard



Spannelement mit Zustellung /
clamping element with infeed



Type 22
art. no. 221701

Type 45
art. no. 30591

Type 80-Z
art. no. 1148085

Type 190
art. no. 221702

Type 190-Z
art. no. 221703

kundenspezifisch
customer-specific
art. no. 1019193