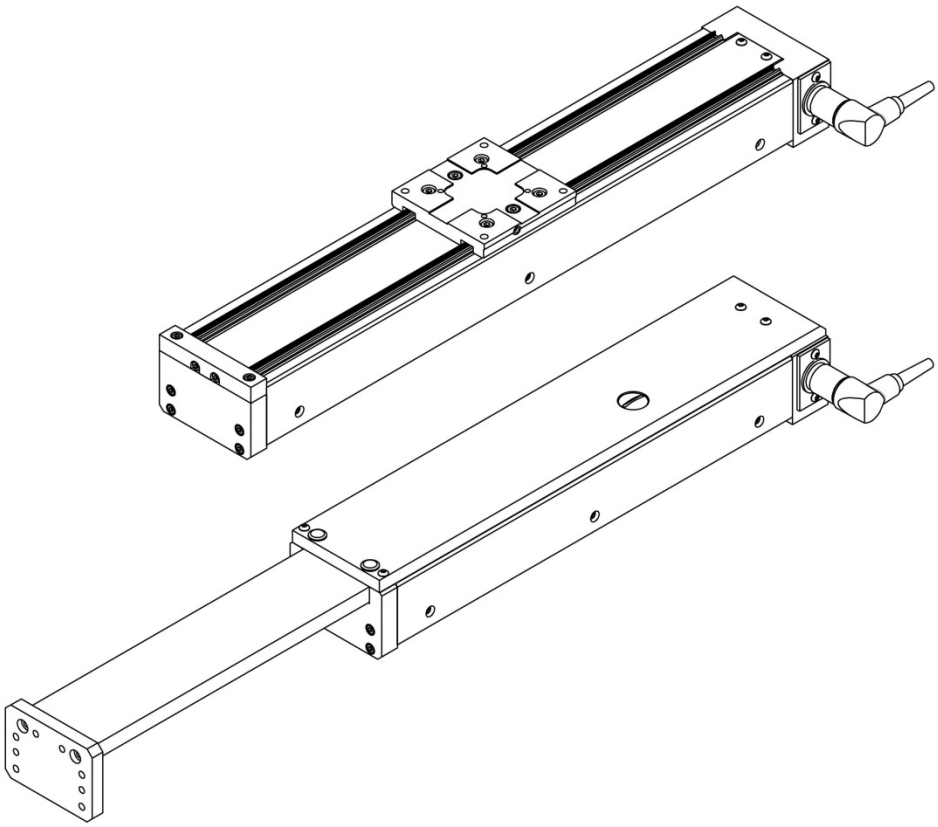
Operating Manual

Product name: profiLINE 70 (AL)
Product ID: 1039734



Translation EN of the original version (DE)

IEF-Werner GmbH | Wendelhofstraße 6 | DE-78120 Furtwangen | www.ief-werner.de

Use

- The operating manual must be available at the component at all times.
- The operating manual must be available at the component/device at all times.
- Always use the complete original (or the original translation) of this operating manual.

Supplier & Manufacturer

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Service

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History of Changes

Document Code	Date	Modification
DE_profiLINE70_R3a.doc	2002 / 2003	New generation of the (German) document
MAN_DE_1039732_profiLINE70_R4a.doc	February 2010	Document updated regarding the new machinery directive (MRL 2006/42/EC).
MAN_DE_1039732_profiLINE70_R4b.doc	June 2010	Alignment of several texts/tables/passages.
MAN_DE_1039734_profiLINE 70 (AL)_R5a.doc	June 2017	New layout. Update of the entire document. Expanded by profiLINE 70 AL (outrigger axle).
MAN_DE_1039734_profiLINE 70 (AL)_R5b.doc	September 2017	Cross-reference on page 33 corrected

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Texts and examples have been created with great care.
Nevertheless, errors cannot be excluded.
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We are always grateful for suggestions for improvements and information about errors.

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1 Declaration of Incorporation

EC declaration of incorporation in the sense of the EC directive 2006/42/EC (machinery), Annex II 1. B.

The manufacturer:
IEF-Werner GmbH
Wendelhofstraße 6
78120 Furtwangen - Germany

hereby declares that the following component (the incomplete machine/partial machine):

Designation	IEF-Werner parts group number
profiLINE 70 (AL)	TG1000734

Where possible based on the scope of delivery, corresponds to the following basic requirements of the directive on machinery (2006/42/EC):
Annex I, item: 1.1.2; 1.1.3; 1.1.5; 1.3.2; 1.3.4; 1.5.1; 1.7.3; 1.7.4

The incomplete machine also corresponds to the following further directives:

- Directive 2014/30/EU of the council, dated 15 December 2004, for harmonisation of the legal provisions of the member states on electromagnetic compatibility.
- Directive 2014/35/EU of the council, dated 12 December 2006, for harmonisation of the legislation of the member states regarding electrical equipment for use within specified voltage thresholds.

The technical documents have been generated according to Annex VII part B and may be electronically submitted to the national authorities upon justified request.
List of some applied harmonised standards:
DIN EN ISO 12100-1,-2 / DIN EN ISO 13857 / DIN EN ISO 13850 / DIN EN 60204-1

Commissioning of the components (incomplete machine) delivered by us is not permitted until it has been determined that the overall system into which the component is installed meets the basic safety and health protection requirements according to Annex I of the above
EC directive 2006/42/EC.

Name of the documentation officer: Frank Reichelt, technical editor
Address of the documentation officer: see manufacturer's address

Furtwangen, June 2017 Manfred Bär (managing director)

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2 Safety

2.1 Definition of Warning Notes

⚠ DANGER

Indicates danger.

Non-observance of the safety provisions causes death.

⚠ WARNING

Indicates potential danger.

Non-observance of the safety provisions may cause death or severe injury.

⚠ ATTENTION!

Indicates potential danger.

Non-observance of the safety provisions may cause injury.

CAUTION

Indicates potential danger. Non-observance of the safety provisions may cause property damage.

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2.2 General Warning Notes

The component (linear unit profiLINE 70 (AL)) must only be commissioned by specialists who received safety-technical instruction and are able to assess potential dangers.

Furthermore, all chapters of this operating manual must have been read and understood completely.

⚠ DANGER

Warning of dangerous electrical voltage.

The component must be powered down for all assembly, disassembly or repair work. Non-observance of the safety provisions may cause death.

⚠ WARNING

Linear modules must only be operated with their protective device/s.

Linear units always have to be operated in connection with suitable safety devices (e.g., safety cell, protective room, protective housing, light curtain).

⚠ ATTENTION!

Warning of hot surface

During operation, heating of the motor, in particular of stepper motors, can cause the burns of the skin when touching the motor. Install a protective device, if possible! Do not touch the marked areas or wait for an adequate cooling time.

⚠ ATTENTION!

Do not remove plugs or clamps when live.

Motor connectors must not be inserted or disconnected when live.
Risk of burning of the contacts and risk of flying sparks.

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2.3 Special Hazard Warnings

In addition, this operating manual also contains the following special hazard warnings:

⚠ WARNING

Warning of crushing of limbs.

These points of the components pose the danger of crushing of limbs in operation.

profiLINE 70:

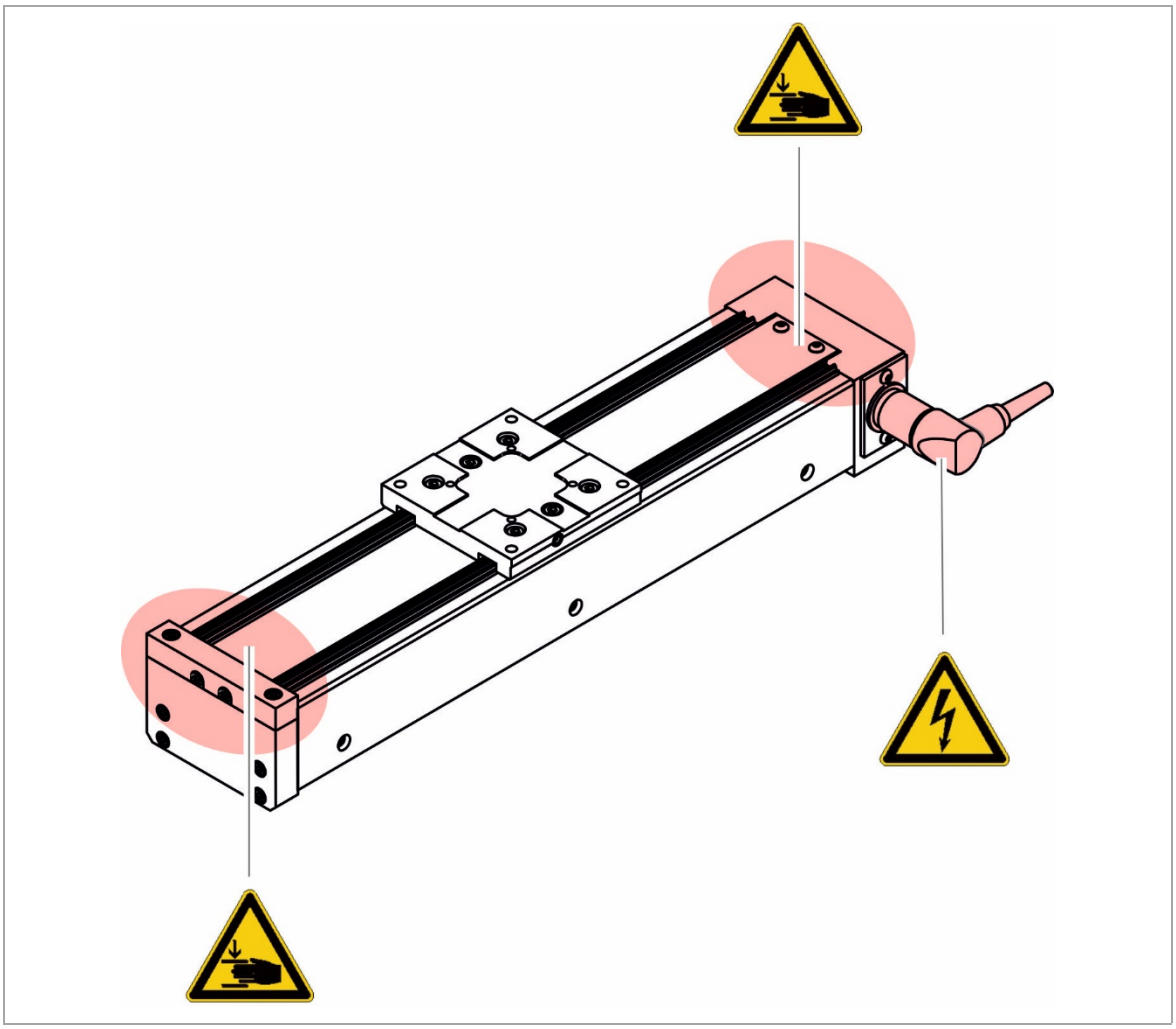

Figure 1 Dangers at the profiLINE 70

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profiLINE 70 AL:

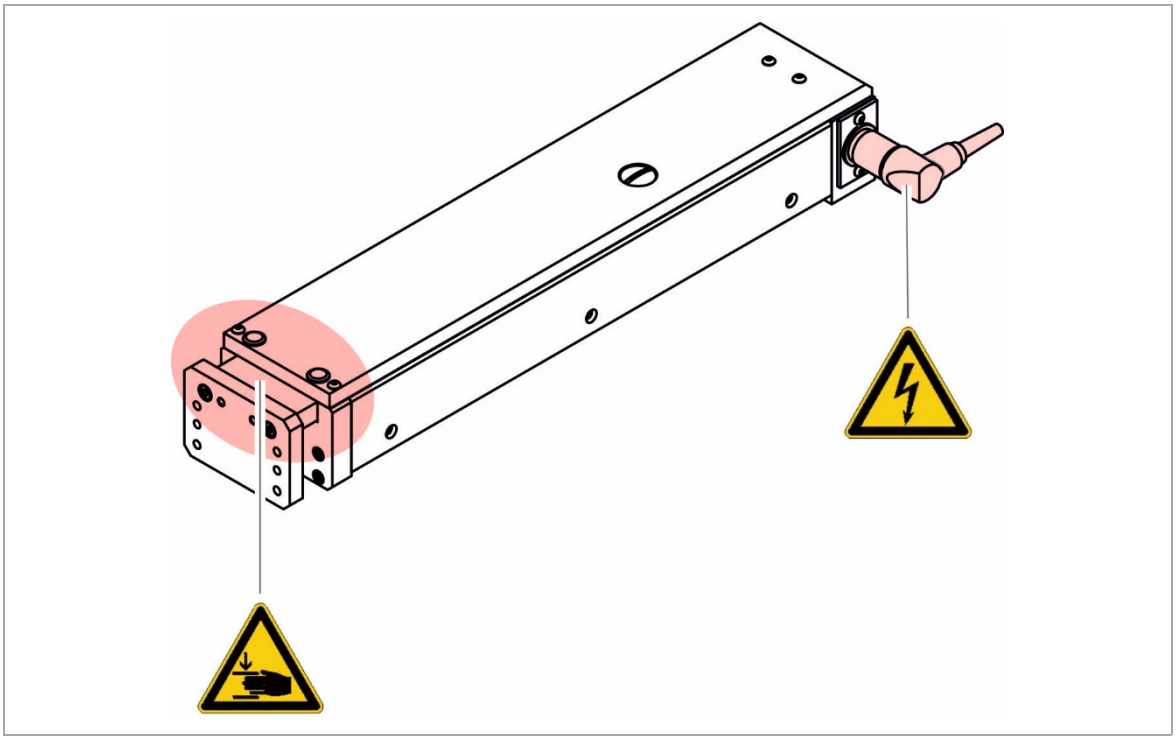

Figure 2 Dangers at the profiLINE 70 AL (outrigger retracted)

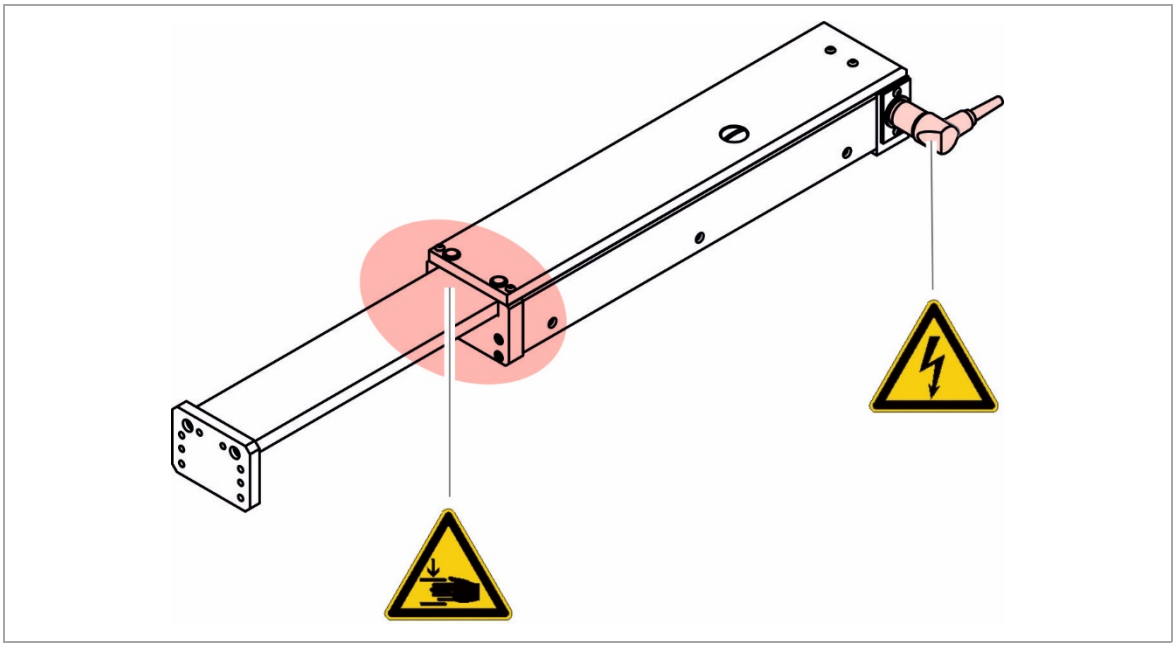

Figure 3 Dangers at the profiLINE 70 AL (outrigger extended)

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3 Intended Use

The linear units profiLINE 70 and profiLINE 70 AL (outrigger axle) are precise, linear adjustment units with spindle drive that are used in the commercial area as an attachment part in connection with other components.

In combination with many standardised assembly elements, as well as the other linear modules of IEF-Werner GmbH, it can be used to build complex multi-axis handling systems as well.

The spindle-powered linear unit profiLINE 70 AL is outstandingly suitable for handling small parts. This linear unit has been specifically developed into an outrigger or vertical axle.

Usage areas for the linear units profiLINE 70/profiLINE 70 AL include:

- Equipment systems
- Palletising systems
- Loading and unloading stations
- Manipulators for the packaging industry
- etc.

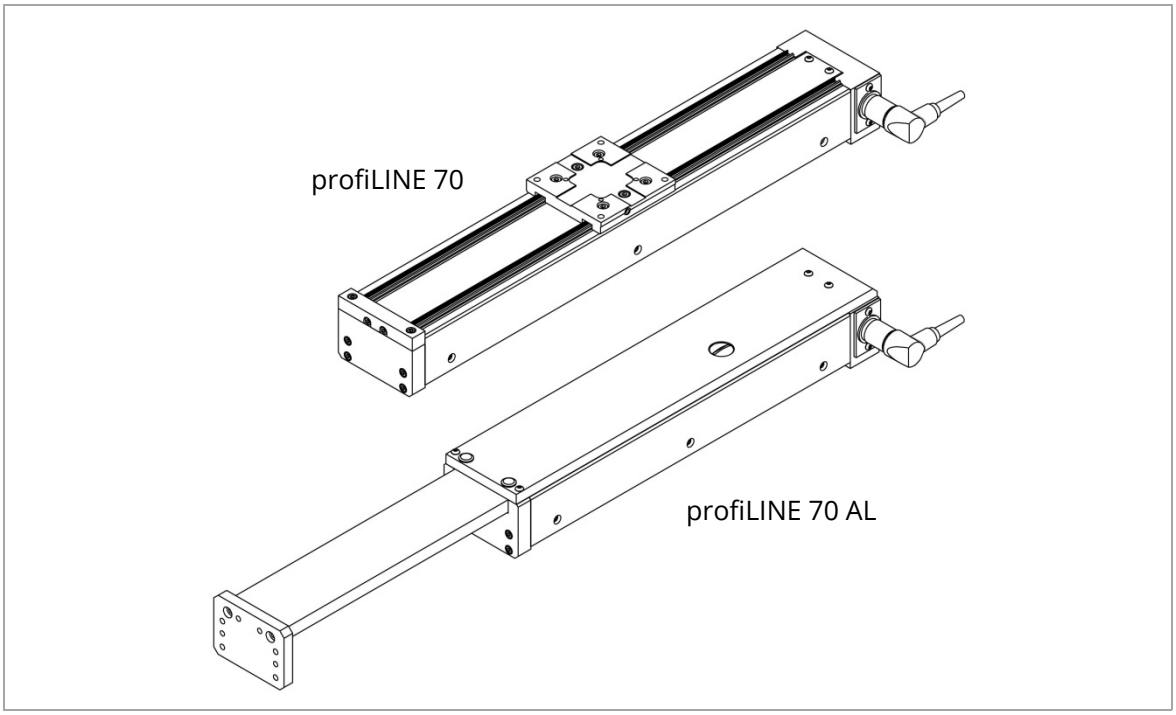

Figure 4 Linear units profiLINE 70 and profiLINE 70 AL

3.1 Reasonably Foreseeable Misuse

The linear unit profiLINE is not to be used for certain applications such as the transport of persons and animals or as a pressing/bending device for cold working of metal.

Use of the linear module without additional measures is also not possible in special fields of application, such as the chemical or food industry or in explosive atmospheres.

In case of doubt, consult the manufacturer.

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4 Assembly Instructions

4.1 Installation Position

The installation position is optional, i.e. the linear units profiLINE 70 and profiLINE 70 AL can be used horizontally as well as vertically.

CAUTION

In the vertical installation position, use only motors with spring-operated brake to prevent the lowering of the drive in de-energized condition.

4.2 Motor installation

CAUTION

Wire the motors according to the motor data sheet.

When using customer-specific motors, inquire at the respective manufacturer with which cable the motor has to be connected.

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4.2.1 Axial Motor Installation

In the profiLINE 70 and profiLINE 70 AL, the motor is installed on the spindle extension via an axial motor flange (adapter flange).

The motor shaft is coupled with the spindle shaft by means of a pluggable coupling.

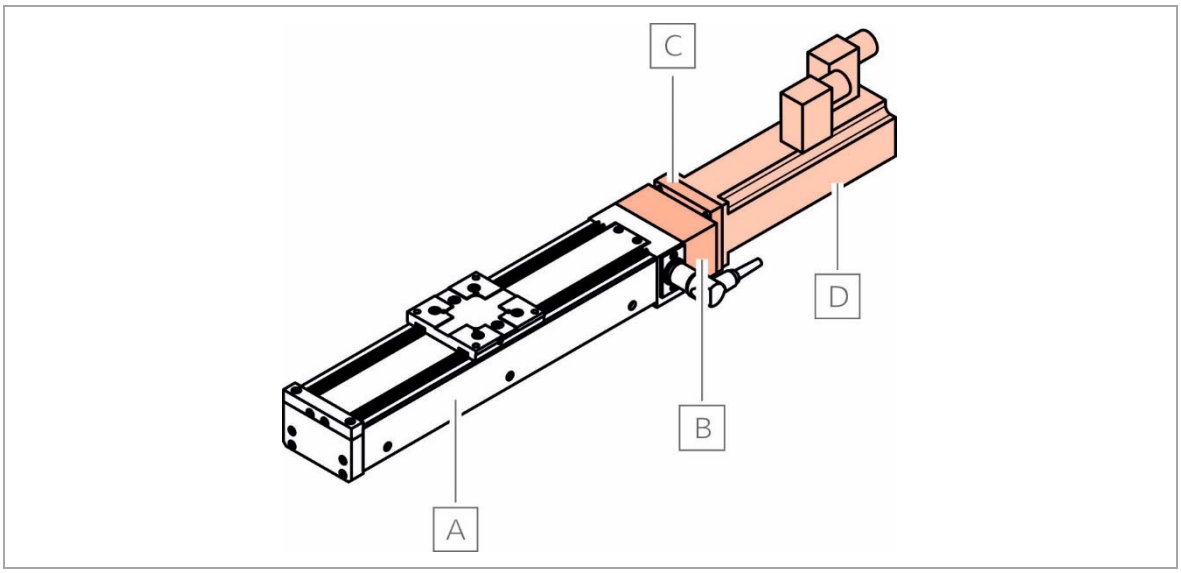

Figure 5 profiLINE 70 with axial motor attachment

A profiLINE 70
B Interim flange
C Flange plate (motor-specific)
D Motor

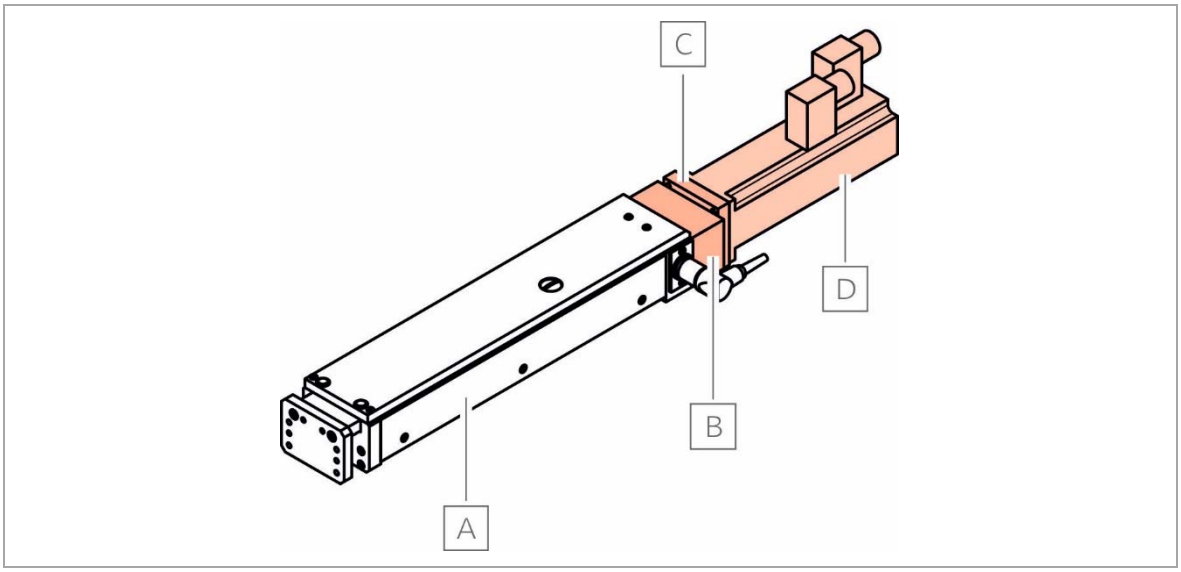

Figure 6 profiLINE 70 AL with axial motor attachment

A profiLINE 70 AL
B Interim flange
C Flange plate (motor-specific)
D Motor

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4.2.2 Pluggable Coupling

The pluggable coupling system consists of the spindle coupling hub, the motor coupling hub and an elastic ring gear.

The following motor coupling hubs are available:

Motor shaft diameter	Motor coupling hub parts number
Ø5 H7	1064060
Ø6 H7	1064061
Ø6.35 H7	1064063
Ø8 H7	1064626
Ø9 H7	1064064
Ø10 H7	1064065
Ø11 H7	1064066
Ø14 H7	1064067
Elastomer ring for EK10	1064068

Different motor shaft diameters are available on request

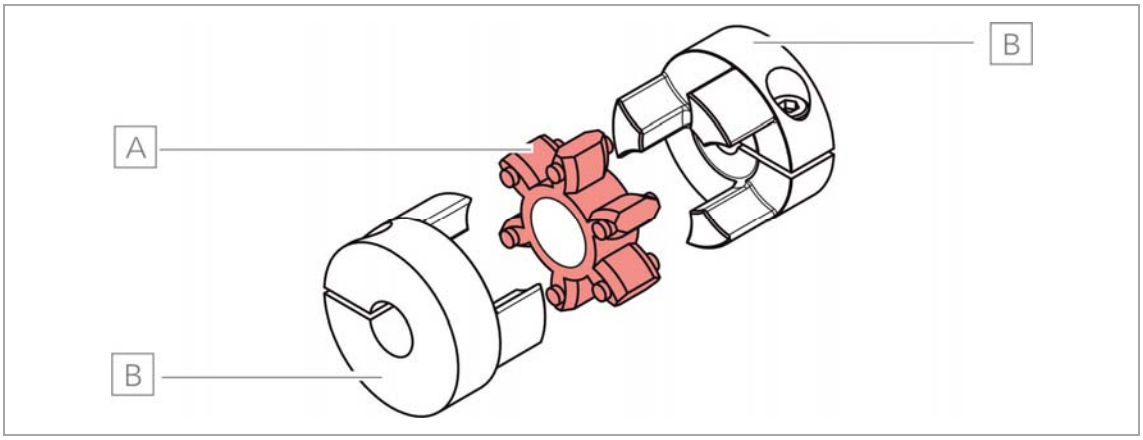

Figure 7 Pluggable coupling

A Elastic ring gear

B Motor or spindle coupling hub

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When installing the coupling, special care must be taken not to load the elastic ring gear with axial pressure.

It has to be ensured that the installation dimension "M" = 13 mm is observed in the installed condition.

Light greasing can reduce the axial installation force.

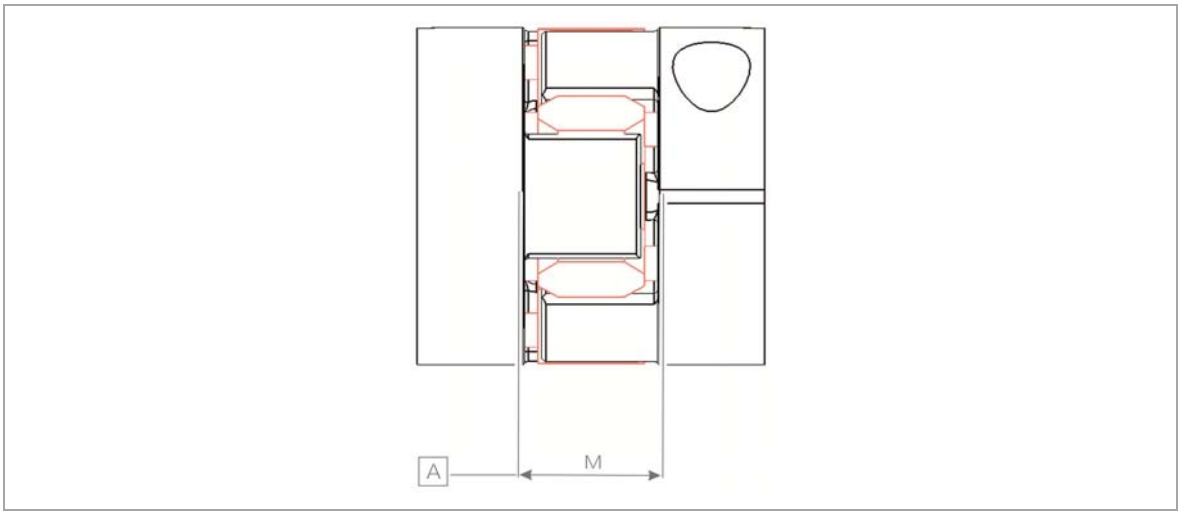

Figure 8 Coupling with installation dimension

A M = 13 mm

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4.3 Transverse Installation

An X/Y connection plate is available for cross installation of two profiLINE 70 modules with the IEF-Werner part number: 1031426.

This connection plate has three pin bores that are equipped with alignment pins. The alignment pins serve as alignment aids for cross-installation. Two methods are available for cross-installation of two profiLINE 70 modules:

4.3.1 Guide Body on Carriages

Cross-installation takes place by an X/Y connection plate (e.g. part no. 1031426).
The overall height of the transverse mounting is 122 mm.

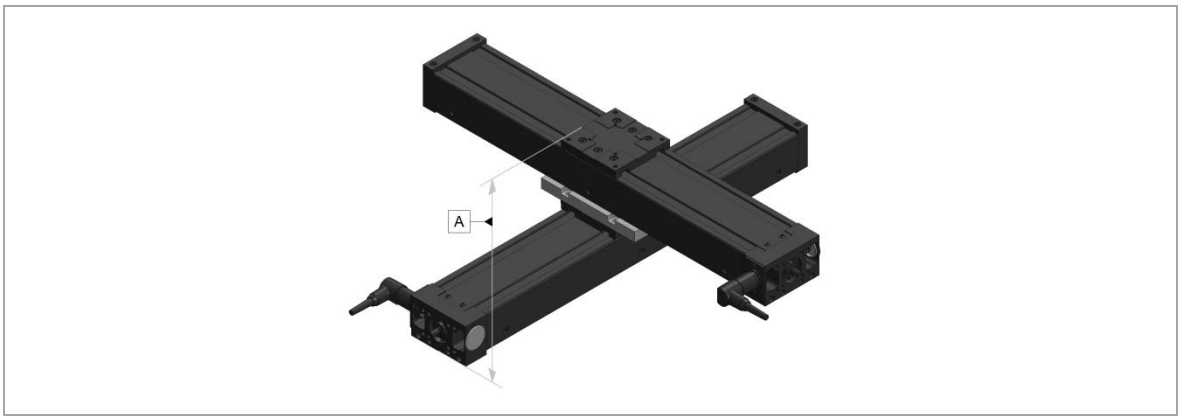

Figure 9 Basic body on carriage

A Total height of the cross-installation: 122 mm

4.3.2 Carriage on Carriage

Cross-installation takes place by two X/Y connection plates (part no. 1031426).
The overall height of the transverse mounting is: 134 mm.

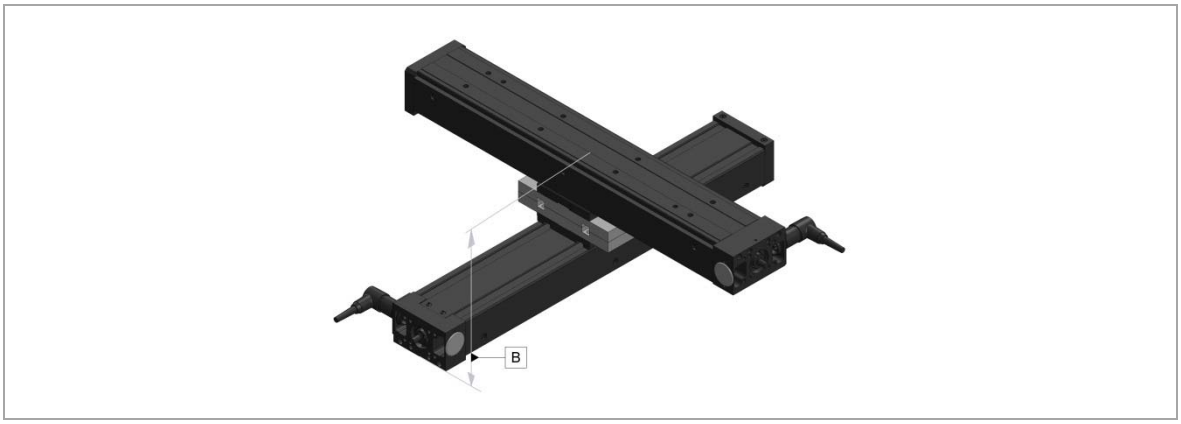

Figure 10 Carriage on carriage

B Total height of the cross-installation: 134 mm

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4.3.3 Motor Attachment via Angled Gear Flange

Benefits of this assembly version are:

- Shorter length
- Gear reduction
- Adjustment to customer-specific attachment situations via four possible attachment versions

By default, the transmission ratios 1:1, 2:1 and 2.5:1 are available.

Motor attachment versions:

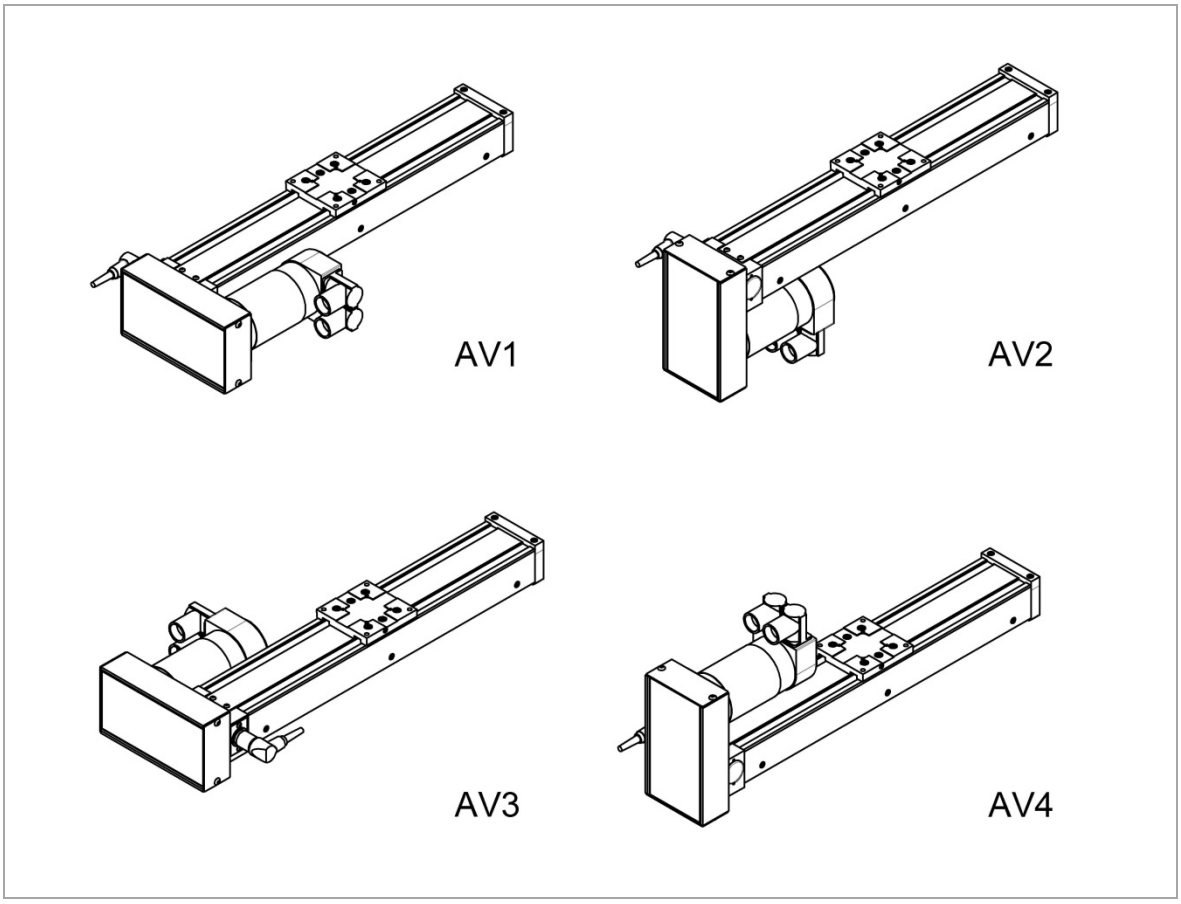

Figure 11 Motor attachment via angled gear flange (motor attachment versions (AV) 1-4)

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Gear flange TG1000822 exploded drawing

Z-Pos.	Part no.	Designation	E=spare part V=wear part
10	*)	Gear housing 80mm	
30	*)	Toothed belt 16 AT5	V
40	*)	Pulley motor	
50	*)	Clamping set motor	
60	1032765	Gear housing lid	
70	TG1000775	Gear insertion lid	
80	626072	Lens-head screw ISO 7380 - M4 x 8 - 10.9 galv.	
90	1003346	Clamping set	
100	1040862	Sprocket St 34.0 AT5/16-0	
110	1041715	Sprocket St 34.0 AT5/40-0	
150	*)	Splitter, flat	

*) Part number, depending on components used, defined more precisely in customer-specific parts list

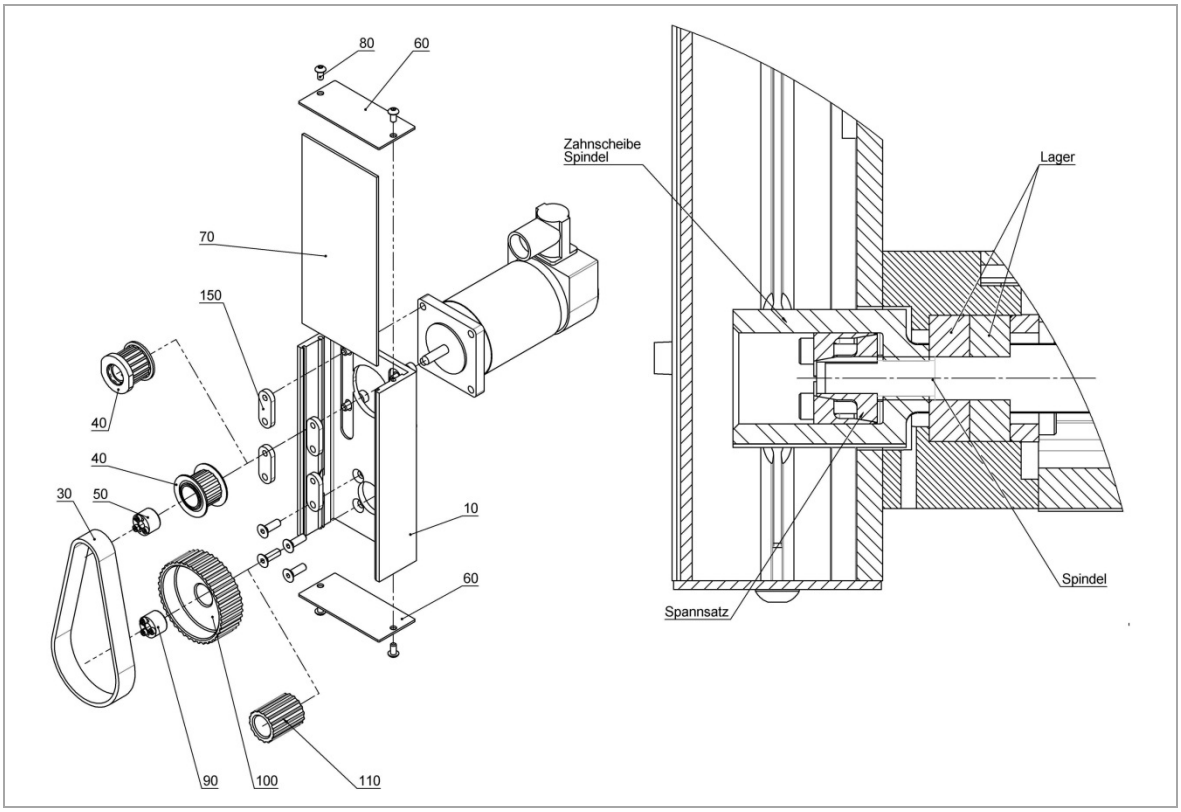

Figure 12 Motor attachment via angled gear flange TG1000822

Note:

The axial play of the axial bearing unit is eliminated by the sprocket on the spindle side. The sprocket is screwed onto the axial bearings at the spindle end to the stop using the thread. This removes any axial play of the bearings. The spindle set on the spindle side then fastens the sprocket towards the spindle.

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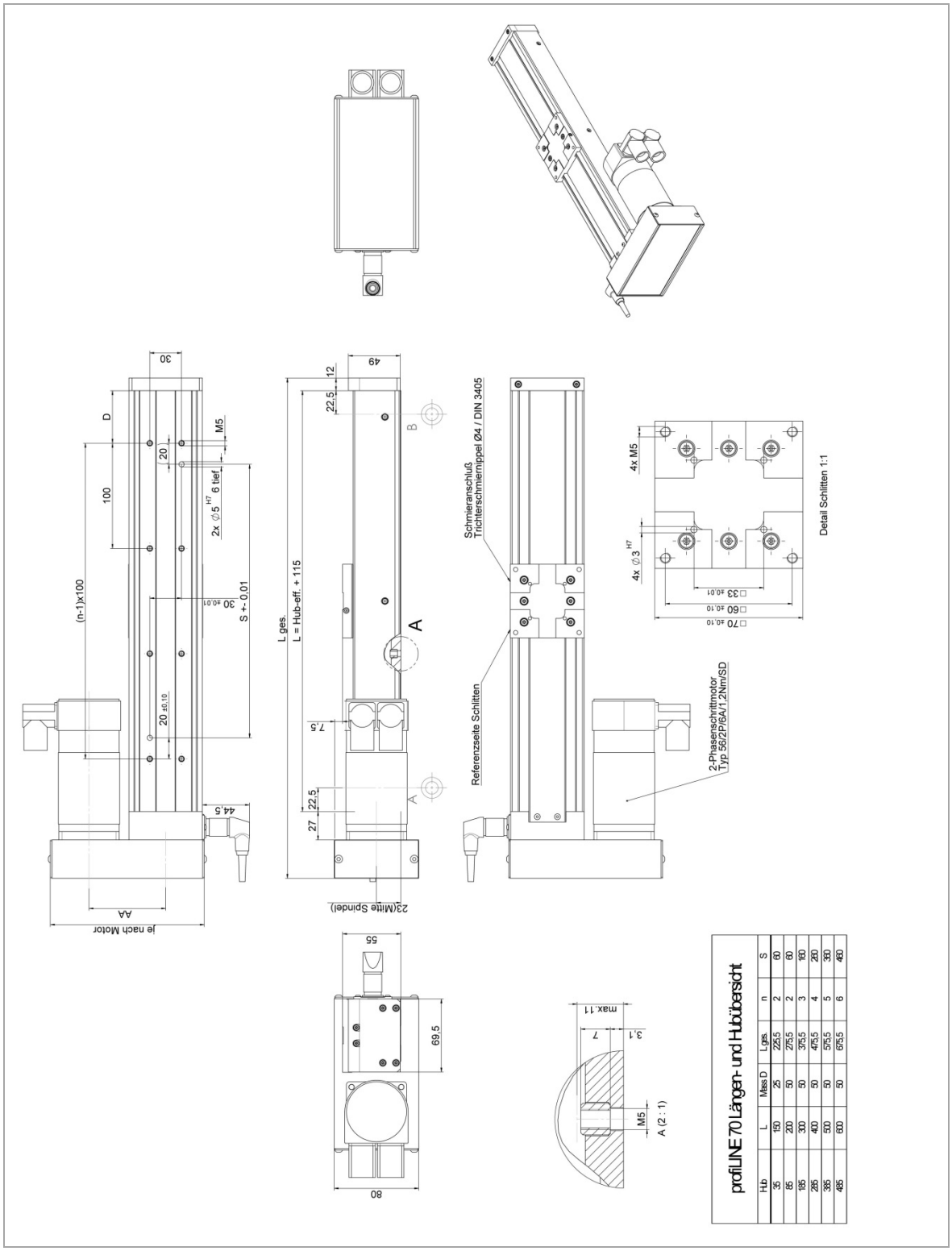

Hub	L	Mass D	Lges.	n	S
35	150	25	225,5	2	60
85	200	50	275,5	2	60
185	300	50	375,5	3	160
285	400	50	475,5	4	260
385	500	50	575,5	5	360
485	600	50	675,5	6	460

Figure 13 Motor attachment via angled gear flange attachment version 1

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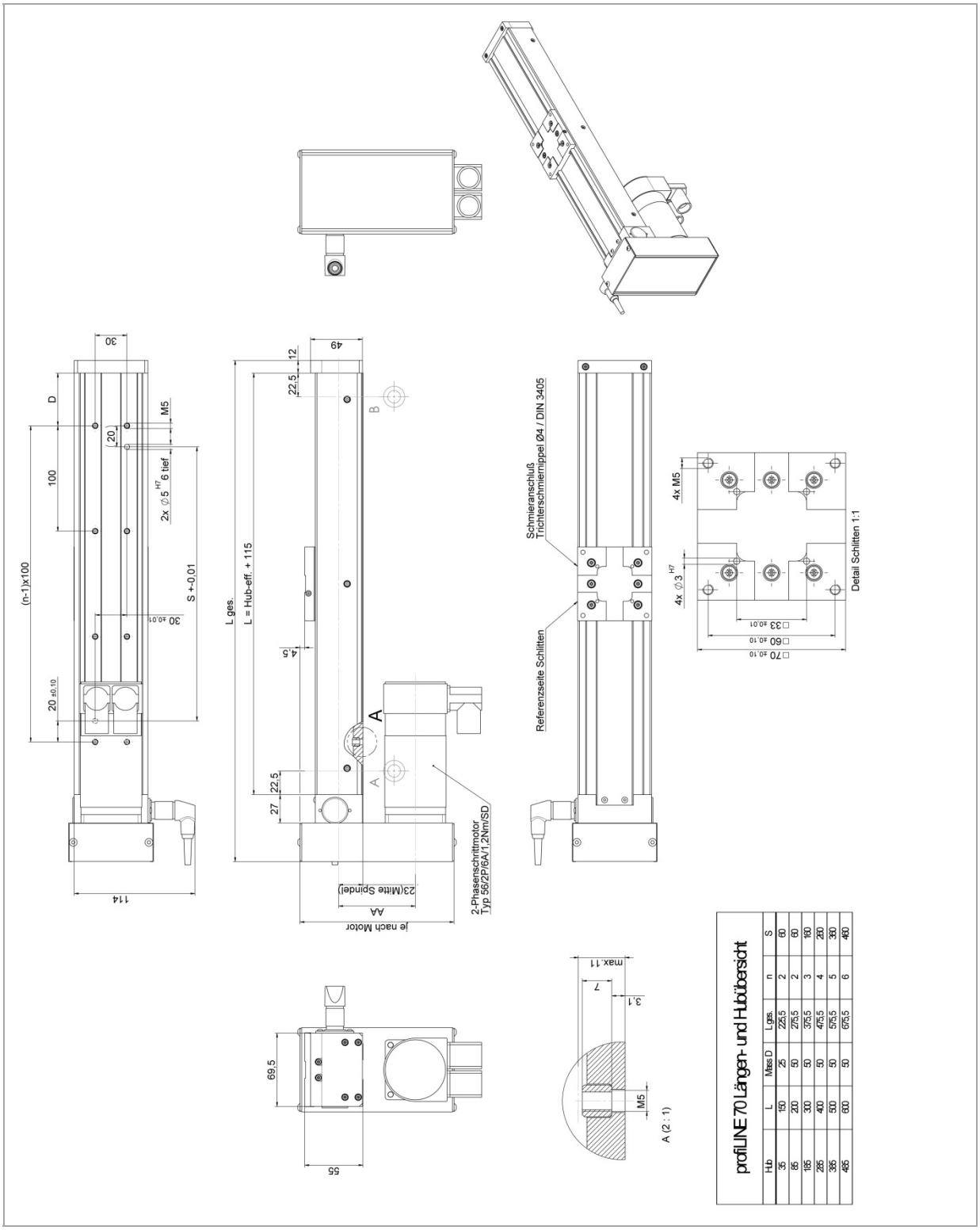

Figure 14 Motor attachment via angled gear flange attachment version 2

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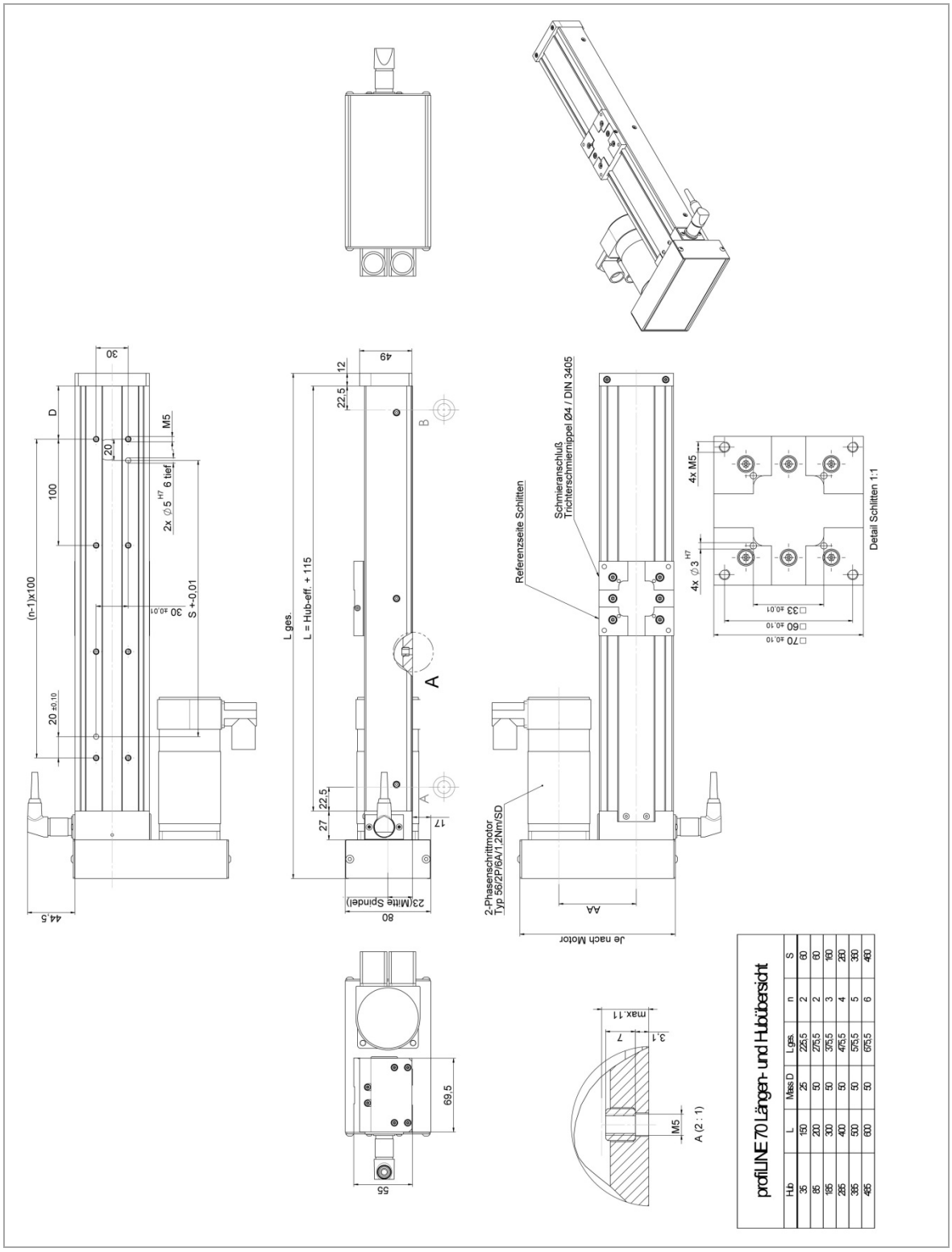

Figure 15 Motor attachment via angled gear flange attachment version 3

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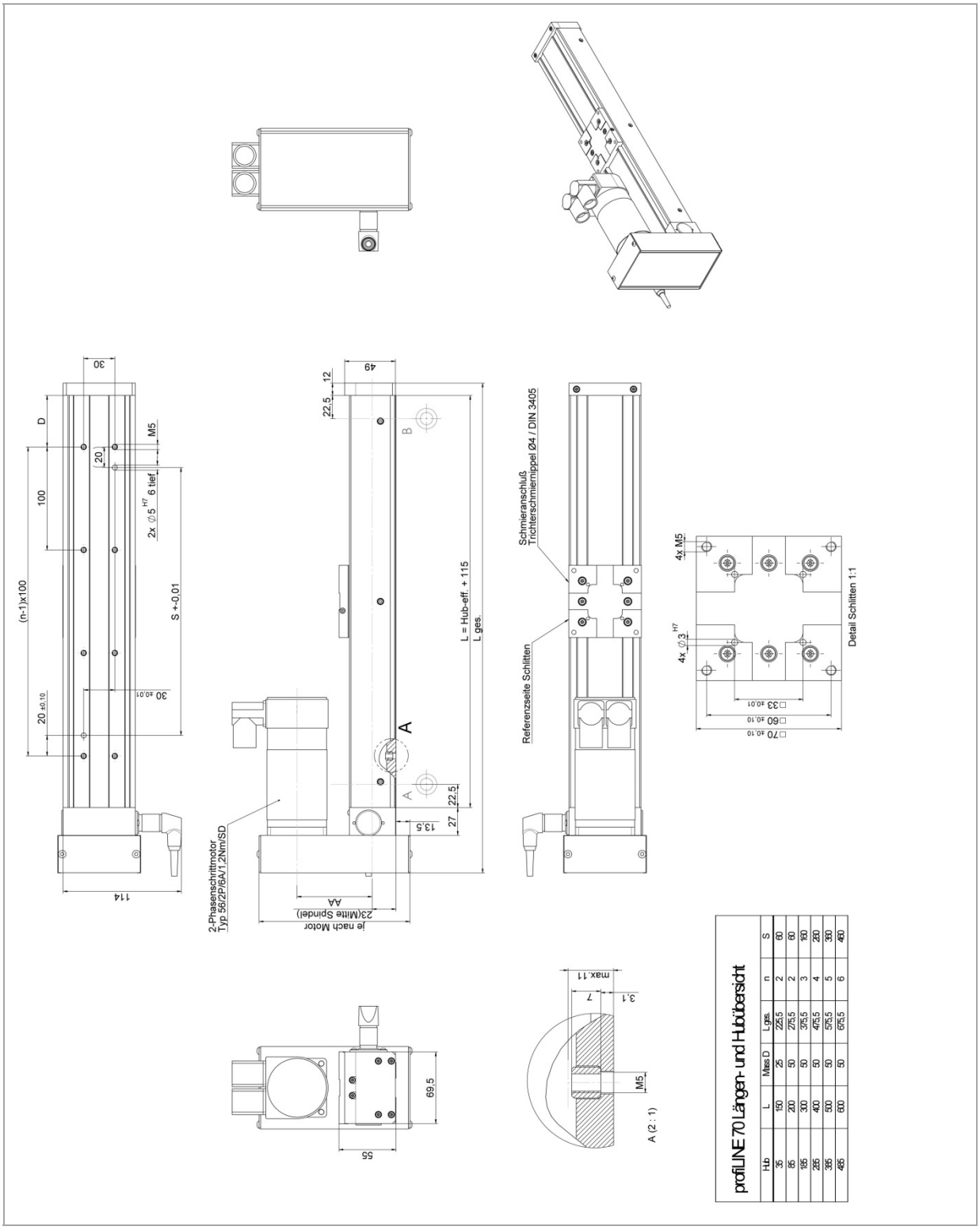

Figure 16 Motor attachment via angled gear flange attachment version 4

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4.4 Attachment

The profiLINE 70 and profiLINE 70 AL linear units are attached only from 'below'. Threaded sleeves with M5 thread are available for this. The number of threaded sockets depends on the length of the rail guide and can be taken from the dimensions table in Figure 34, page 49 (variable 'n').

CAUTION

During attachment of the profiLINE 70 and profiLINE 70 AL module, observe that the maximum screw-in depth of 9 mm is not exceeded because this would lead to severe damage to the guide system.

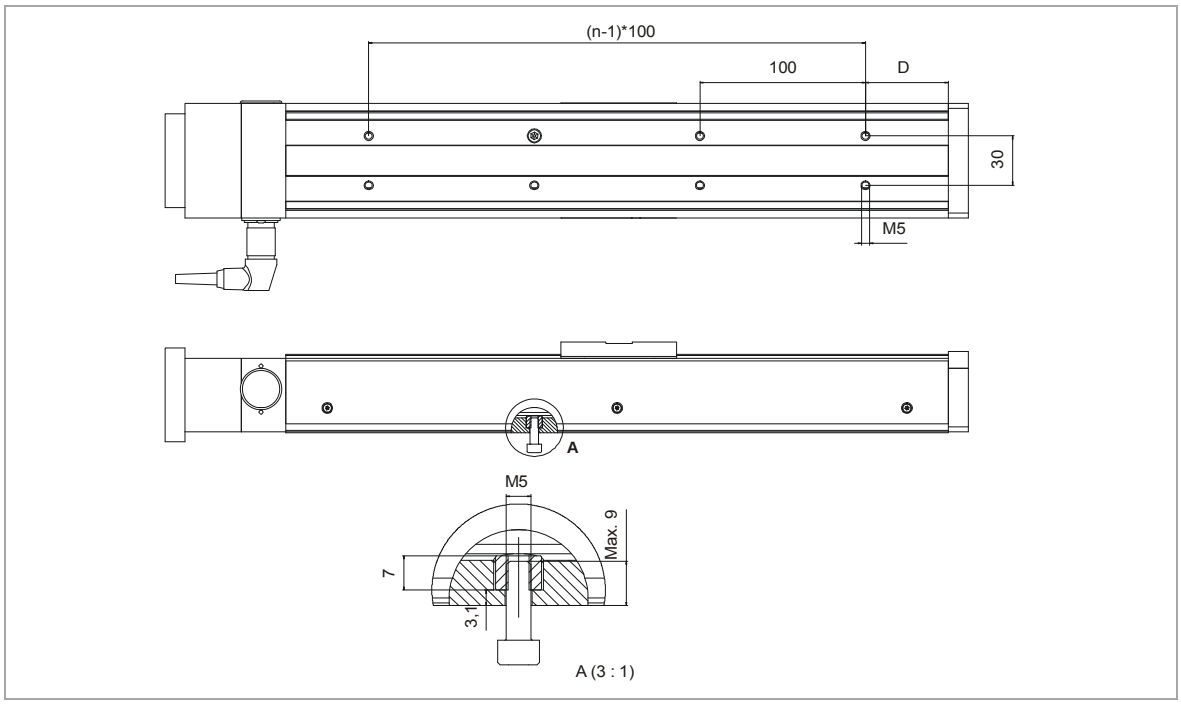

Figure 17 Attachment of the linear unit

The installation area has to be a flat surface. Any deviations from an ideal flat plane directly affect the processing precision.

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4.4.1 Installation of Actuators

The actuators (cylinders, pick-up modules, etc.) that are to be installed on the profiLINE 70 and profiLINE 70 AL movement unit can be attached via the drilling pattern on the carriage.

Four threaded bores (M5) and four pin bores Ø3^{H7} mm are available for attachment of actuators to the profiLINE 70.

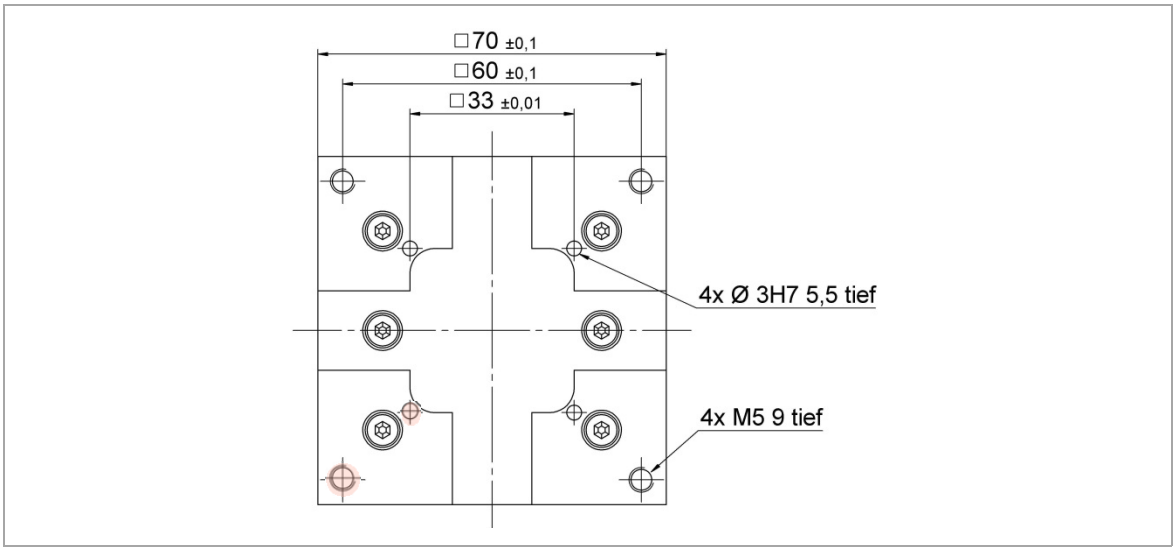

Figure 18 Hole pattern for the profiLINE 70 carriage (1029992)

The outrigger axle profiLINE 70 AL also has four threaded bores (M5) and two centring bores Ø^{4H7}. Instead of the threaded bores M5, these can also be used from the rear as passage bores in connection with cylinder-head screws M4 (see figure below).

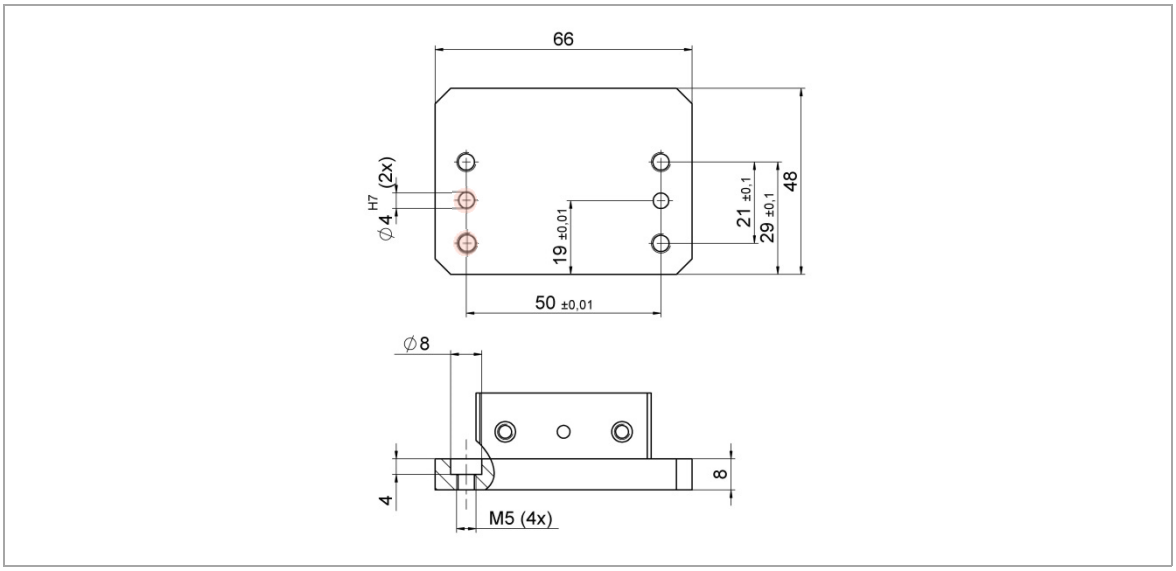

Figure 19 Hole pattern for the profiLINE 70 adapter plate (1088077)

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4.5 Wiring

4.5.1 Motors

CAUTION

The electrical connection of the motors is performed according to the motor data sheet.

For customer-specific motors, the data sheet must be requested from the respective manufacturer and the motor connected accordingly.

4.5.2 Initiators

Inductive proximity switches (PNP normally closed contacts, green switch operating point) are used as standard stroke limit switches.

CAUTION

These stroke limit switches are not safety limit switches according to EN60204-1.

Optionally, an additional reference point switch (PNP normally open contact, red switch operating point) can be used on the opposite carriage side. An LED is available for detection of the switch status.

Initiators and cables are installed in an aluminium profile and routed centrally to a plug.

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4.5.3 Technical Data of Initiators

Parameter	Value
Operating voltage incl. residual ripple	(10 ... 30) VDC
Operating voltage residual ripple	< 10 %
Current load capacity	$I_a \leq 150$ mA
Voltage drop at I_a max.	≤ 3.5 V
Switching frequency	≤ 1000 Hz
Own current consumption	≤ 10 mA
Nominal switching distance on steel	2 mm
Switching hysteresis	(3 ... 15)%
Reproducibility (R_{max})	± 3 %
Operating temperature	- 25 °C ... +70 °C
Protection class	IP 67
Short-circuit proof	yes
Protected against polarity reversal	yes
Switch dampened	LED off
Switch not dampened	LED lit

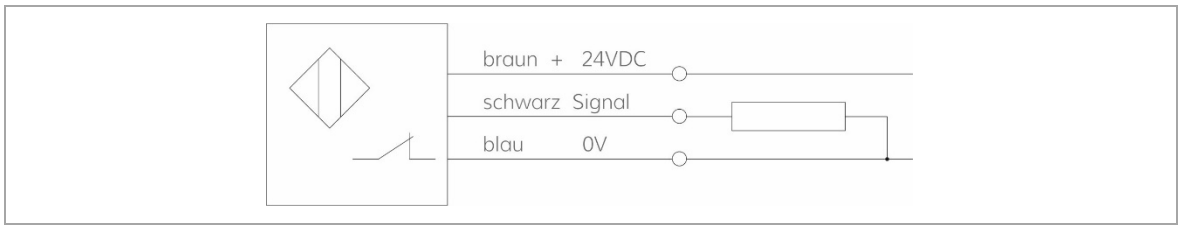

Figure 20 Connection assignment PNP-normally closed

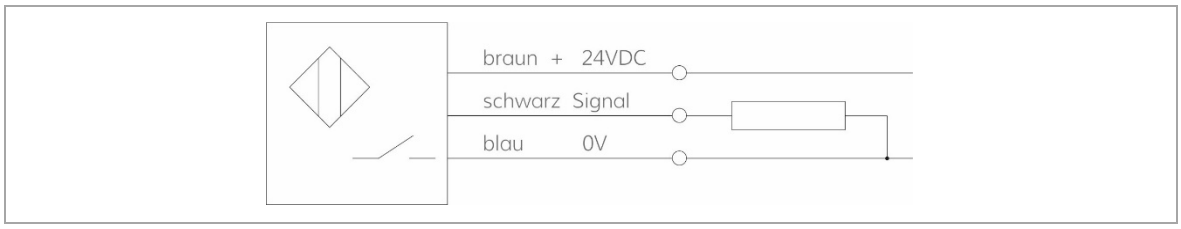

Figure 21 Connection assignment PNP-normally open

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The end position switch is assigned as follows:

Pin-No.	Assignment	IEF-Werner cable
1	+ 24 V	brown
2	Limit switch negative direction	green
3	0 V	white
4	Limit switch positive direction	yellow
5	Reference switch	grey

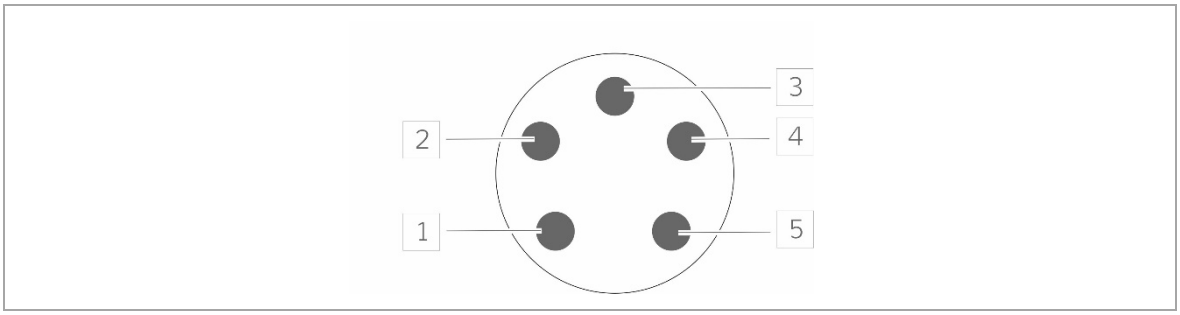

Figure 22 Plug assignment IEF-standard plug for reference and end position switch

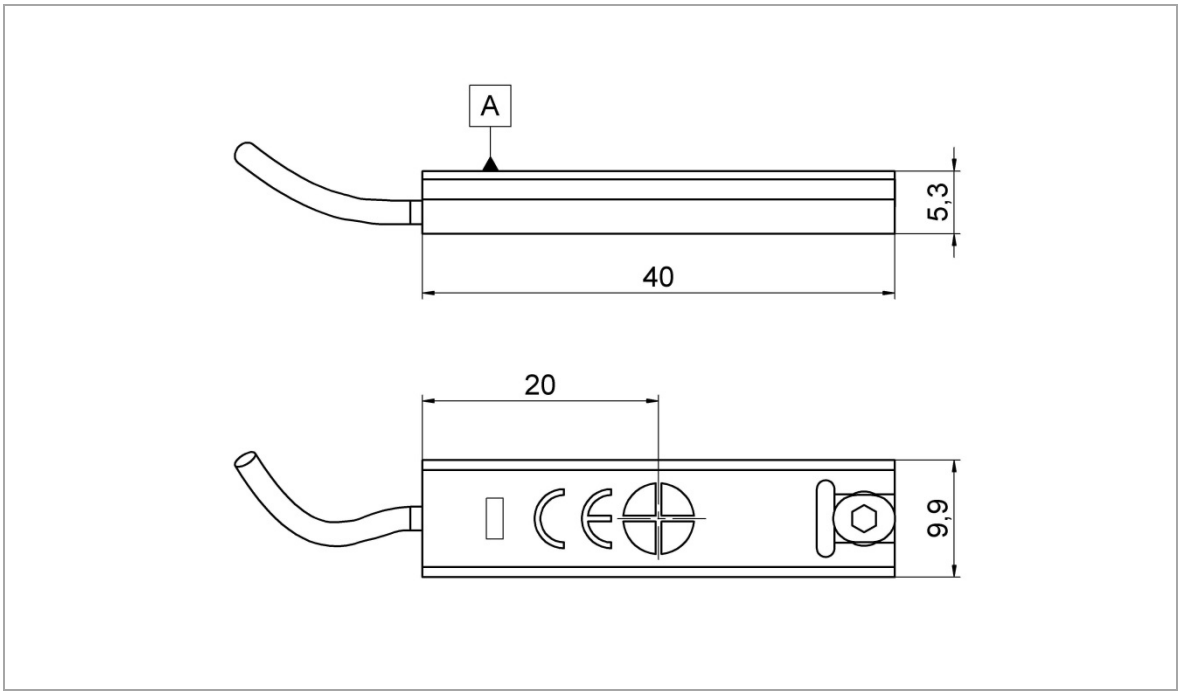

Figure 23 Scaled sketch of inductive proximity switch

A Active surface

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4.5.4 Installation of Initiators

Initiators and cables are installed in one of the side parts and are routed centrally to a plug. Installation of the initiators is possible on the right or left side of the linear unit.

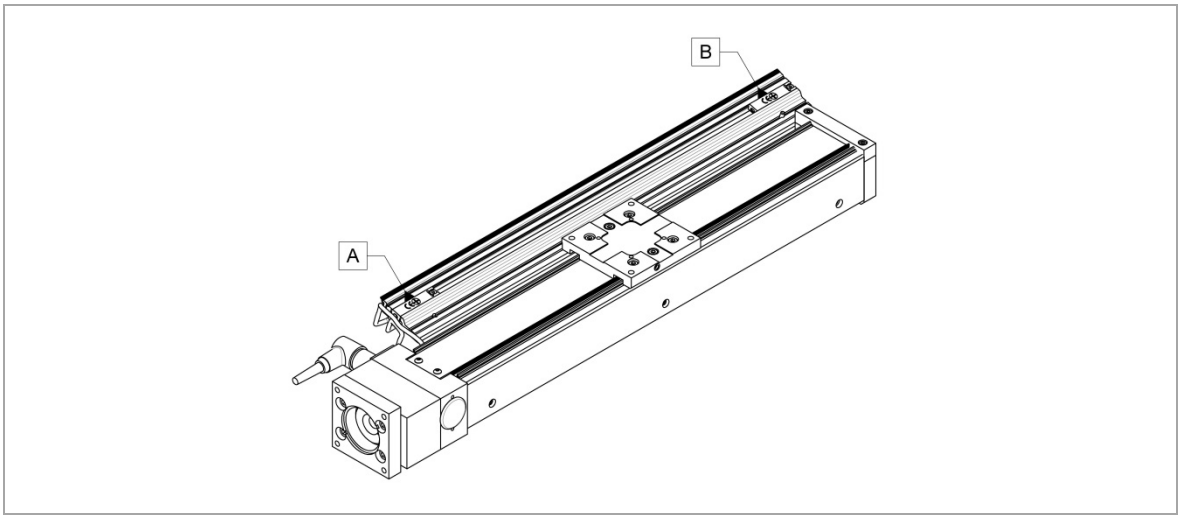

Figure 24 Installation of Initiators

A Initiator/limit switch -X *B* Initiator/limit switch +X

4.5.5 Cable Routing

For all moving cables, suitable cable routing has to be used to effectively prevent cable breaks. The minimum radius r_{min} for cable routing chains is calculated for IEF-Werner cables according to the following formula:

$$r_{min} \geq 10 \times \text{cable diameter}$$

When different cables are used, EN 60204 must be observed. In addition, it must be ensured that a space reserve of 30% is kept free within the routing chains. A strain relief for the cables has to be attached at the outlet of the cable routing chain.

We recommend purchasing genuine cables and energy chains from IEF-Werner GmbH.
Please contact us. We will gladly advise you.

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4.6 Technical Data

4.6.1 Tightening Torques for Screw Connections [Nm], ISO 4762, Regulating Threads

Strength class	M3	M4	M5	M6
8.8	1.28	2.7	5.5	9.5
10.9	1.8	3.8	8	13
12.9	2.1	4.6	9.5	16

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4.6.2 Technical Data of the Linear Module profiLINE 70

Parameter		Value
Maximum carrying capacity C1 [N]	See Figure 25 at the bottom	2000
Maximum carrying capacity C2 [N]		2000
Max. axial stress (F axial) [N]		1500
Max. torque Mx [Nm]		100
Maximum torque My [Nm]		150
Maximum torque Mz [Nm]		100
Temperature range [°C]		0 ... +60
Processing precision [mm/300mm]		≤ 15
Repetition accuracy [µm]		± 3
Positioning accuracy [µm]		≤ 25
Weight [kg] Basic carriage with a stroke of 35 mm, no motor		2.65
Weight increase [kg] per 100 mm length		0.63
Weight [kg] moving carriage (70 mm)		≈ 1.0
Possible spindle pitch [mm]		5 and 10
Basic moment of friction [Nm]		0.1
Maximum permitted spindle speed [1/min]		4000
Geometrical moment of inertia of the basic body in mm⁴		Lx 20,536/Ly 280,453

The specified processing precision is reached only when the movement unit is installed on an absolutely plane surface. The carriage body has to contact the installation surface over the complete area.

We recommend using a ground hard stone plate or a ground steel plate as the plane installation area.

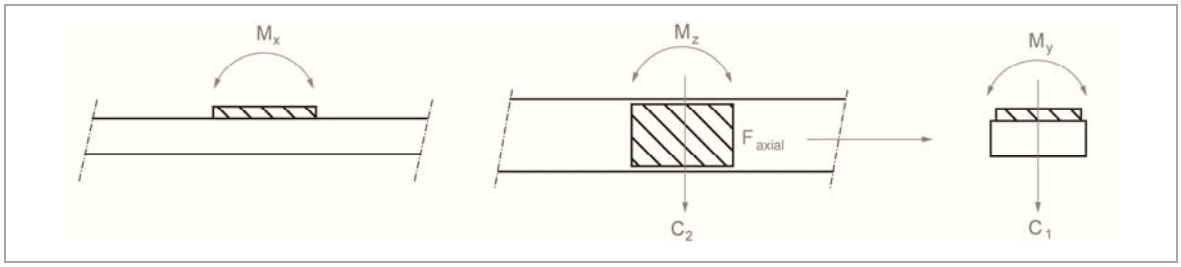

Figure 25 Torques and carrying capacity profiLINE 70

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4.6.3 Technical Data of the Linear Module profiLINE 70 AL

Parameter	Value		
Stroke [mm]	35	85	185
Spindle pitch [mm]	5 / 10	5 / 10	5 / 10
Weight without motor [g]	2790	3680	4720
Temperature range [°C]	0 - 60	0 - 60	0 - 60
Maximum speed [mm/s]	500 / 1000	500 / 1000	500 / 1000
Repetition accuracy [µm]	± 3	± 3	± 3
Protection class	IP 30	IP 30	IP 30

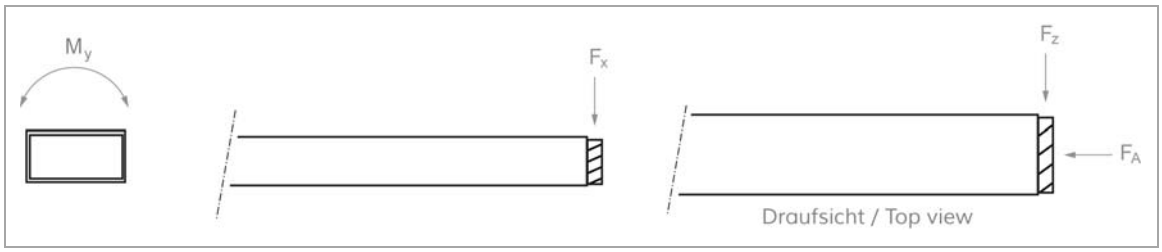

Figure 26 Load capacity

Parameter	Value		
Stroke [mm]	35	85	185
Fx [N]	245	180	115
FA [N]	250	250	250
Fz [N]	245	180	115
My [Nm]	35	35	35

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4.6.4 Type Labels

The rating plates of the linear unit profiLINE 70 or profiLINE 70 AL are installed in the following locations:

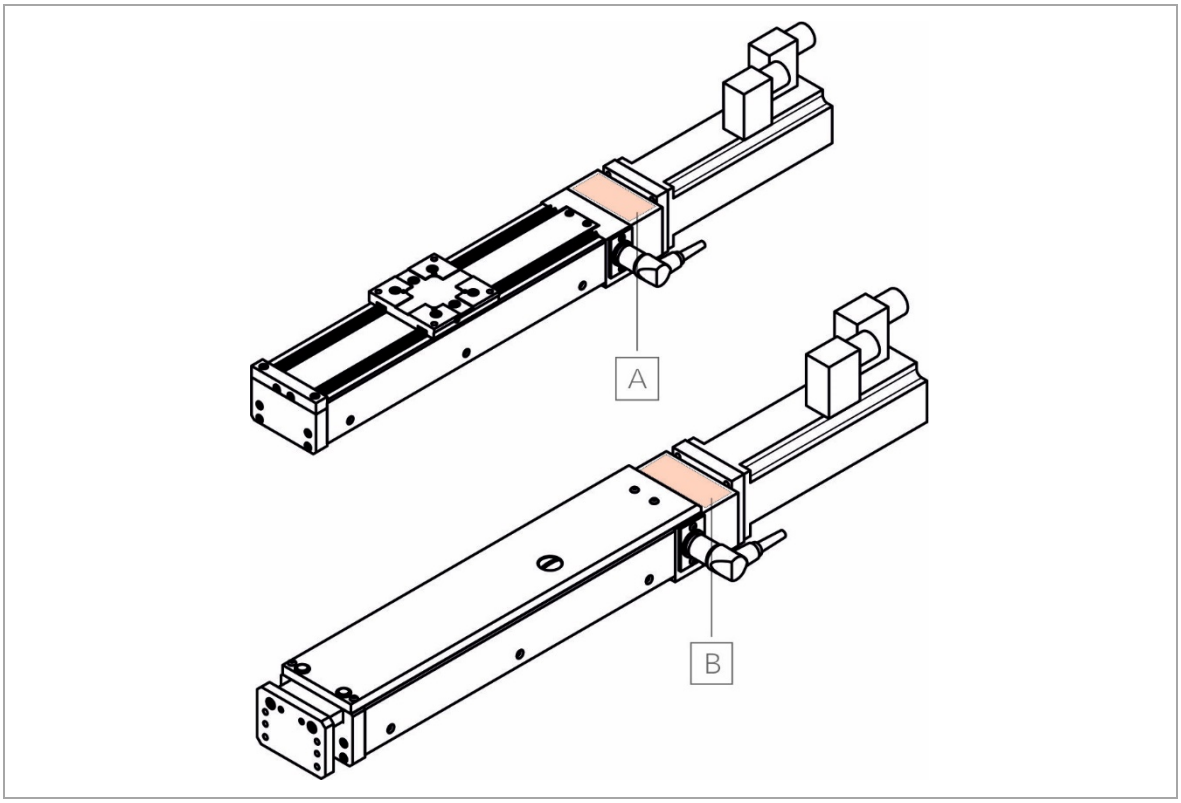

Figure 27 Position of the respective type label

A Type label at profiLINE 70

B Type label at profiLINE 70 AL

Figure 28 Type label (example)

A Parts number

B Serial number

C Type designation

D Infeed / motor turn

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5 Maintenance

⚠ DANGER

Warning of dangerous electrical voltage.

The component must be powered down for all assembly, disassembly or repair work.

Non-observance of the safety provisions may cause death.

CAUTION

Any repairs must only be performed by specialist personnel who have read and understood this operating manual.

Only use genuine spare parts, since IEF-Werner GmbH will not assume any warranty otherwise.

5.1 Lubrication of the Guide Carriage profiLINE 70

Lubrication of the ball guide and the ball roller spindle is ensured externally via lubrication nipple at the carriage unit.

We recommend a lubrication interval of 600 operating hours.

Greasing should take place with the lubricant Isoflex NCA 15 (Klüber). This lubricant can be purchased in tubes in 50-gram packages under part no. 729148 from IEF-Werner GmbH.

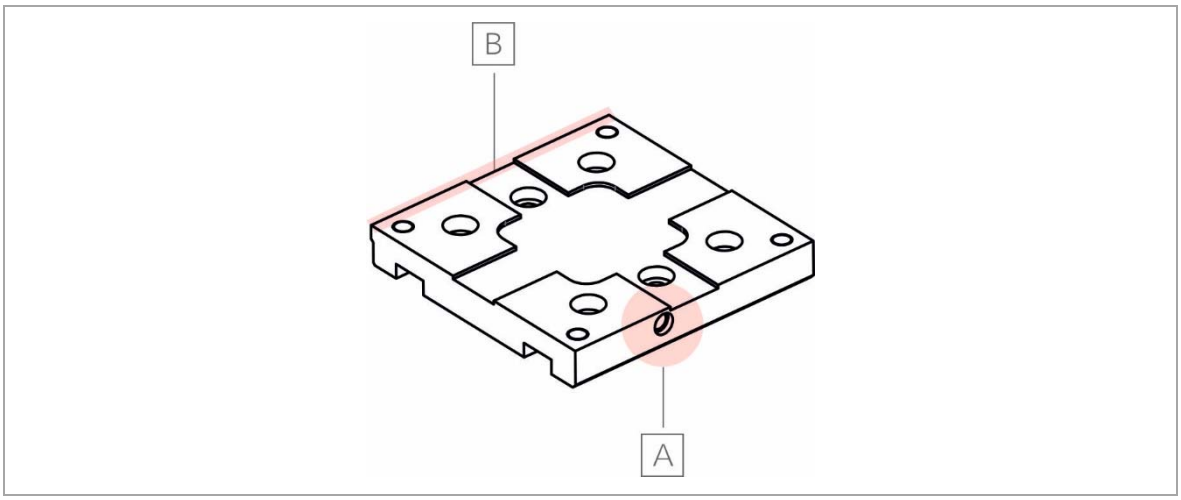

Figure 29 Lubrication profiLINE 70

A Funnel lubrication nipple DIN 3405, type: D4 *B* Reference side

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5.2 Lubrication Option for the profiLINE 70 AL

The compact and closed build of the profiLINE70 AL means that the lubrication point is no longer freely accessible.

The cover flap (A) in the cover plate (B) can be taken off for relubrication.

This makes the central lubrication point of the outrigger (D) accessible from above. The unit can be lubricated with a grease gun (E) via the funnel lubrication nipple (F) here.

The lubrication interval and lubricant are identical with the profiLINE 70 (every 600 operating hours, lubricant: Isoflex NCA 15).

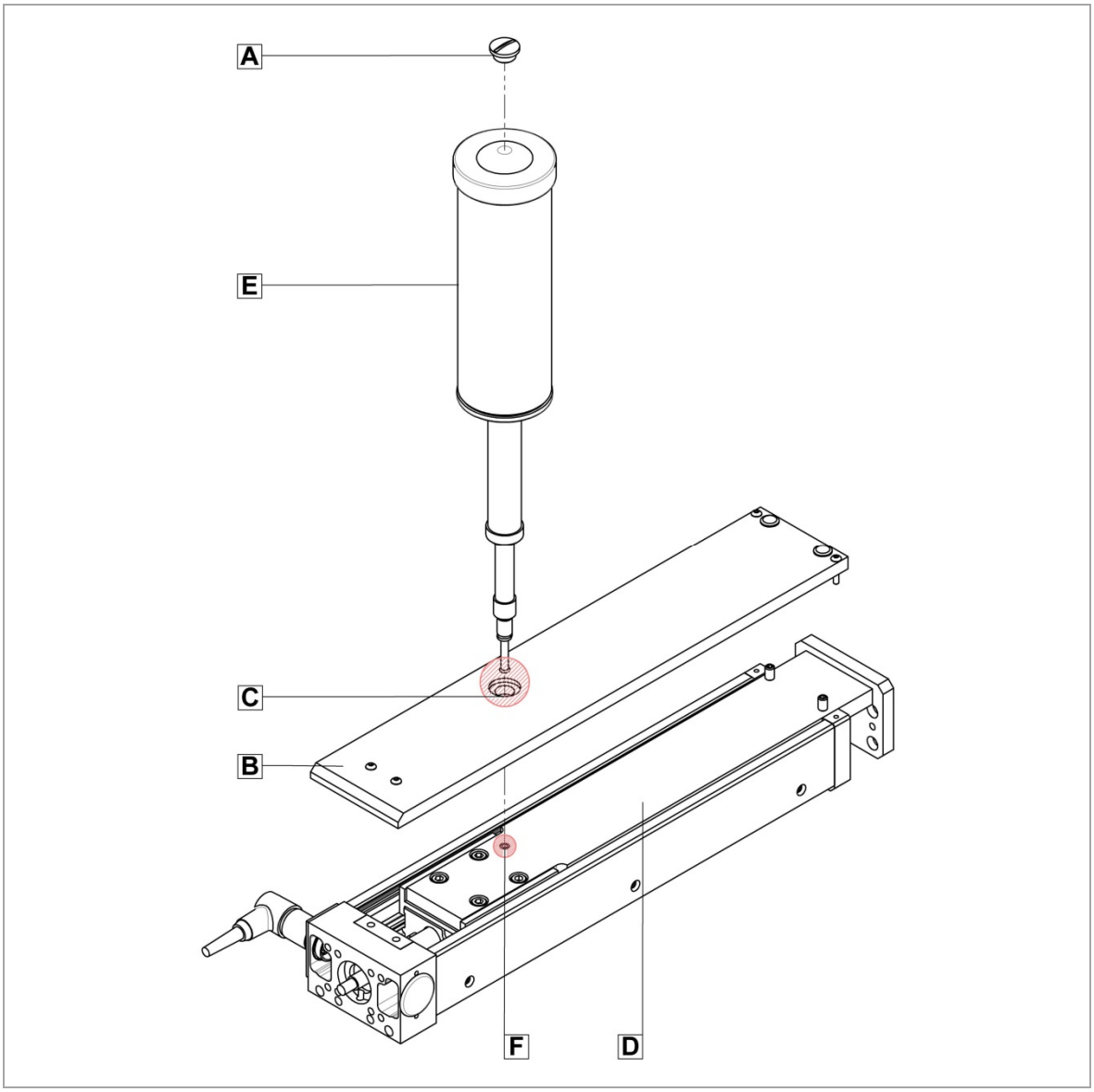

Figure 30 Lubrication profiLINE 70 AL

A Cover flap
B Cover plate
C Lubrication bore in cover flap
D Outrigger
E Grease gun
F Funnel lubrication nipple DIN 3405, type: D4

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5.3 Sealing Lip System

The movement unit is equipped with a sealing lip system of oil- and coolant-resistant FKM material (fluorocarbon rubber) to protect the inside from contamination.

In case of increased abrasion, we recommend to lightly apply grease to the sealing lips in order to increase the sliding characteristics. We recommend the replacement of worn sealing lips by new ones (IEF part number 1004271).

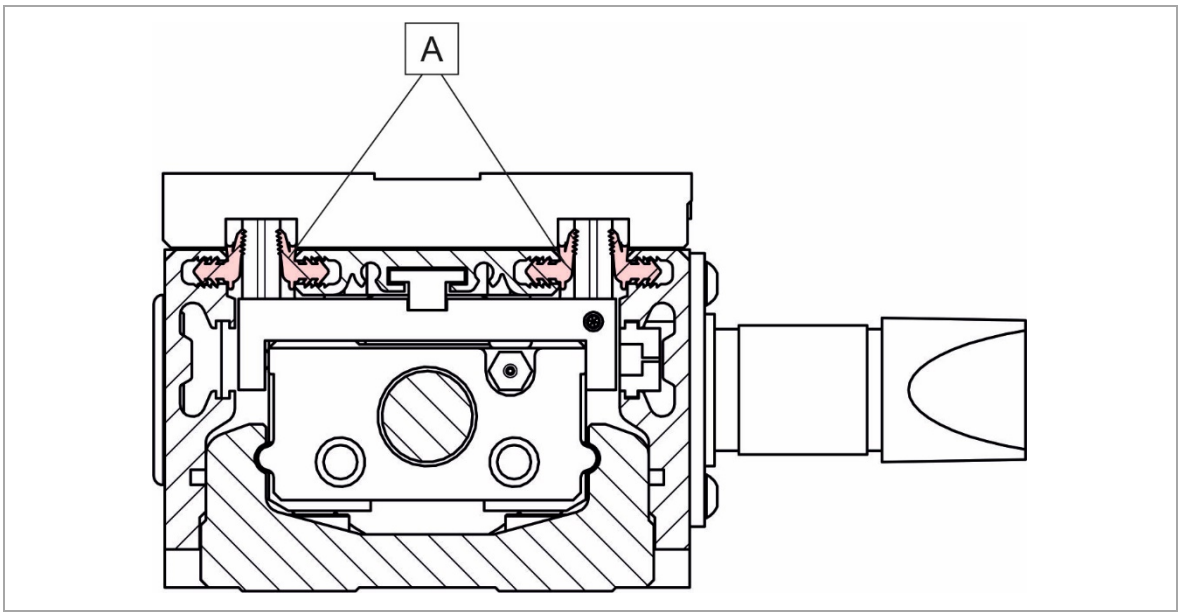

Figure 31 Sealing lip system

A Sealing lip system

CAUTION

It must be possible to perform the setup, maintenance, repair, cleaning and servicing work with the component shut down.

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6 Troubleshooting

Interference	Reason	Correction
Increased running noise	Nominal service life of guide carriage or ball roller spindle exceeded	Complete exchange of the basic unit.
	Axial bearing unit defective	Replace the unit
	Guide carriage, ball rolling spindle runs dry	Perform greasing via lubrication nipple at carriage unit.
	Floating bearing defective	Replace the ball bearing.
	End plates are not aligned to be flush with the ball screw	Align the end plate and bearing plate for the motor (see item 50 and item 70 on drawing in Figure 32, page 45) or for AL: Items 31o and 70 (see Figure 33, page 48).
	Pluggable coupling defective	Replace defective coupling (see items 65-120 or item 130 in drawing in Figure 35, page 50).
	Coupling collides with the flanged housing	Align coupling.
	Motor (motor bearing) defective	Replace motor (see drawing in Figure 32, page 45).
	Motor with brake, brake does not open correctly	Apply current to the brake, if the brake still does not open properly, replace motor (see drawing in Figure 32, page 45).
Linear drive unit does not move	Limit switch cable not connected	Connect the cable.
	Limit switch defective	Replace limit switch (inductive switch) (see item 100 in drawing in Figure 32, page 45).
	Limit switch cable defective	Check limit switch cable, replace cable, if required.
	Solder connection on socket has come loose	Solder on wires.

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Interference	Reason	Correction
Linear drive unit does not move (continued)	Motor connected incorrectly	Check and change connector assignment, if required.
	Motor defective	Replace motor (see drawing in Figure 32, page 45).
	Error in power electronics or control unit	Check the power electronics or the control unit.
	Motor cable defective	Check motor cable, replace cable, if required.
Play on reversal	Axial bearing unit not firmly screwed to end plate	Tighten screws (see item 250 in drawing in Figure 32, page 45).
	Axial bearing unit defective	Replace the unit
	Groove nut not tightened	Tighten groove nut and secure with lateral threaded pins.
	Pluggable coupling defective	Replace defective coupling (see items 65-120 or item 130 in drawing in Figure 35, page 50).
	Coupling collides with the flanged housing	Align coupling.
Linear drive unit moves mechanically against the stop during the reference run.	Incorrect direction of rotation	Change motor direction of rotation.
	Broken motor cable	Replace cable.

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7 Parts Lists and Drawings

7.1 profiLINE 70, TG1000734

Z-Pos.	Parts number	Designation	E=spare part V=wear part
10	*) +	Guide unit	V
20	*) +	Side part	
30	*) +	Cover	
40	1031421	Carriage	
50	1030001	End plate	
60	1030002	Strop	
70	1030391	Bearing plate	
80	732284	Plastic cover type: GPN910/766	
90	1004271	Sealing lip	V
100	25165	Induction switch PNP normally closed contact	E
100	726744	Induction switch PNP normally open contact	E
130	627630	Lens-head screw ISO 7380 - M3 x 8 - 10.9 galv.	
140	25626	Holding sheet	
150	725163	Installation plug, round SFV 50/6	E
160	725164	Coupling angled design 5-pin socket Type: WKV50/6	E
170	1030007	Tension anchor	
180	626164	Lens-head screw ISO 7380 - M3 x 6 - 10.9 galv.	
190	626707	Cylindrical screw DIN 912/ISO 4762 - M3 x 12 8.8 galv.	
200	1045550	Cylindrical screw DIN 912/ISO 4762 - M3 x 10 8.8 galv.	
210	626707	Cylindrical screw DIN 912/ISO 4762 - M3 x 16 8.8 galv.	
220	*) +	Flange for axial motor attachment	
230	626294	Cylinder pin DIN 6325/ISO 8734 - 2 x 6 - A	
250	626705	Cylindrical screw DIN 912/ISO 4762 - M3 x 8 8.8 galv.	

+ use depending on design

*) Part number, depending on components used, defined more precisely in customer-specific parts list

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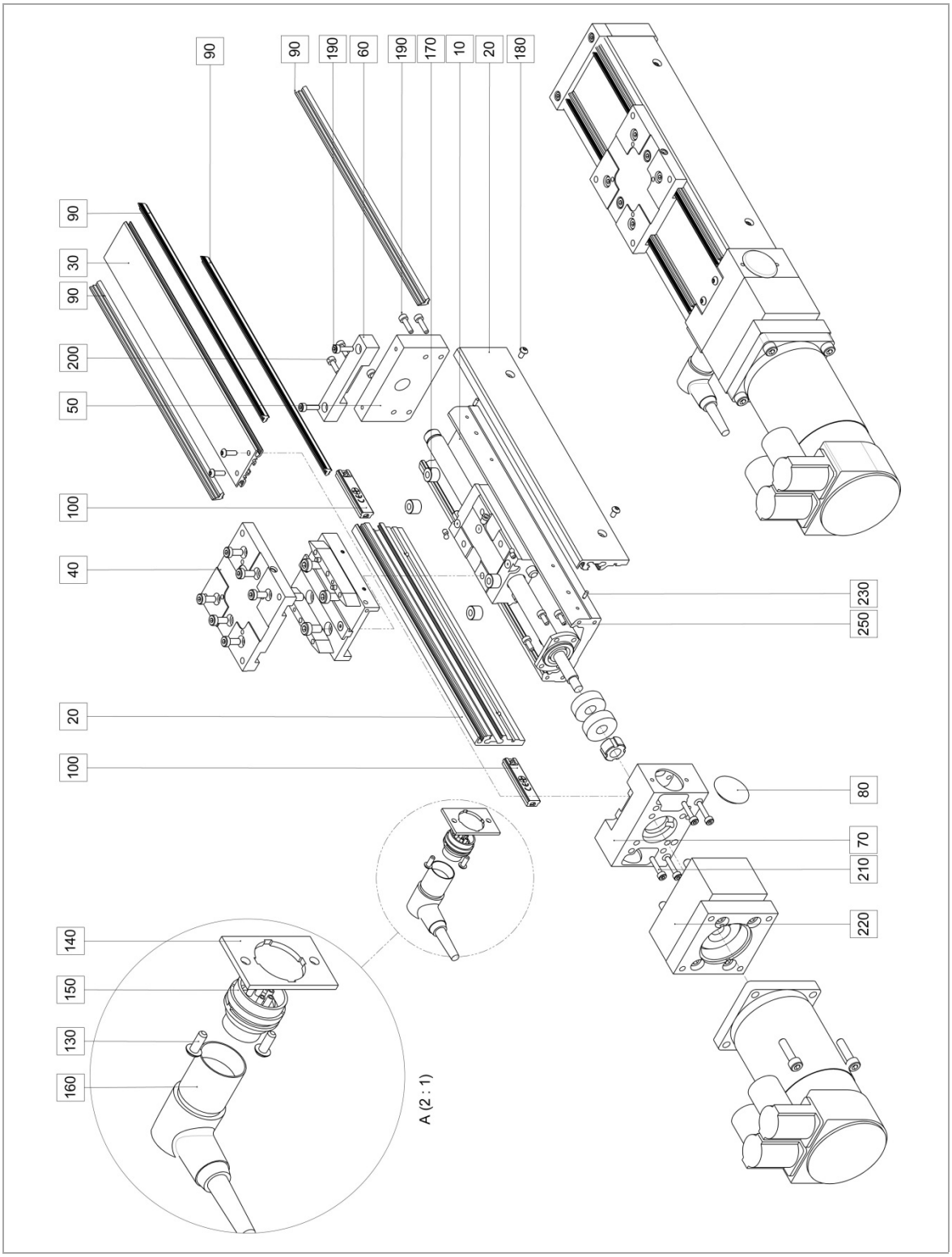

Figure 32 Exploded drawing profiLINE 70

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7.2 profiLINE 70 AL Outrigger Axle, TG 1000734

Z-Pos.	Parts number	Designation	E=spare part V=wear part
10	*) +	Guide unit	V
20	*) +	Side part	
70	1030391	Bearing plate	
80	732284	Plastic cover type: GPN910/766	
100	25165	Induction switch PNP normally closed contact	E
100	726744	Induction switch PNP normally open contact	E
130	627630	Lens-head screw ISO 7380 - M3 x 8 - 10.9 galv.	
140	25626	Holding sheet	
150	725163	Installation plug, round SFV 50/6	E
160	725164	Coupling angled design 5-pin socket Type: WKV50/6	E
170	1030007	Tension anchor	
180	626164	Lens-head screw ISO 7380 - M3 x 6 - 10.9 galv.	
190	626707	Cylindrical screw DIN 912/ISO 4762 - M3 x 12 8.8 galv.	
210	626707	Cylindrical screw DIN 912/ISO 4762 - M3 x 16 8.8 galv.	
220	*) +	Flange for axial motor attachment	
230	626294	Cylinder pin DIN 6325/ISO 8734 - 2 x 6 - A	
250	626705	Cylindrical screw DIN 912/ISO 4762 - M3 x 8 8.8 galv.	
270	*) +	Outrigger	
280	*) +	Cover pL70 outrigger	
290	*) +	Outrigger plate	
300	1088100	Spacer block	
310	1088084	End plate profiLINE 70	

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Z-Pos.	Parts number	Designation	E=spare part V=wear part
320	1095416	Bridge	
330	627088	Cylinder-head screw DIN 7984 - M4 x 10 - 8.8 galv.	
340	1081702	Cover, black GPN340-SW 2,5	
350	626067	Lens-head screw ISO 7380 - M3 x 16 - 10.9 galv.	
360	626068	Lens-head screw ISO 7380 - M3 x 20 - 10.9 galv.	
370	1018771	Threaded pin GN 913.3-M5-8-KU	
380	626487	Cylindrical screw DIN 912/ISO 4762 - M5 x 10 8.8 galv.	
390	1089744	Lubrication adapter	
400	1031602	O-Ring NBR 70 Shore A	V
410	1028704	T.-lubrication nipple DIN 3405, type: D4	
420	626182	Threaded pin DIN 913/ISO 4026 - M5 x 6 - 45H - galv.	
430	627120	Cylinder pin DIN 6325/ISO 8734 - 4 x 16 - A	
440	1001240	Closure screw brass M12x1.5	

+ use depending on design

*) Part number, depending on components used, defined more precisely in customer-specific parts list

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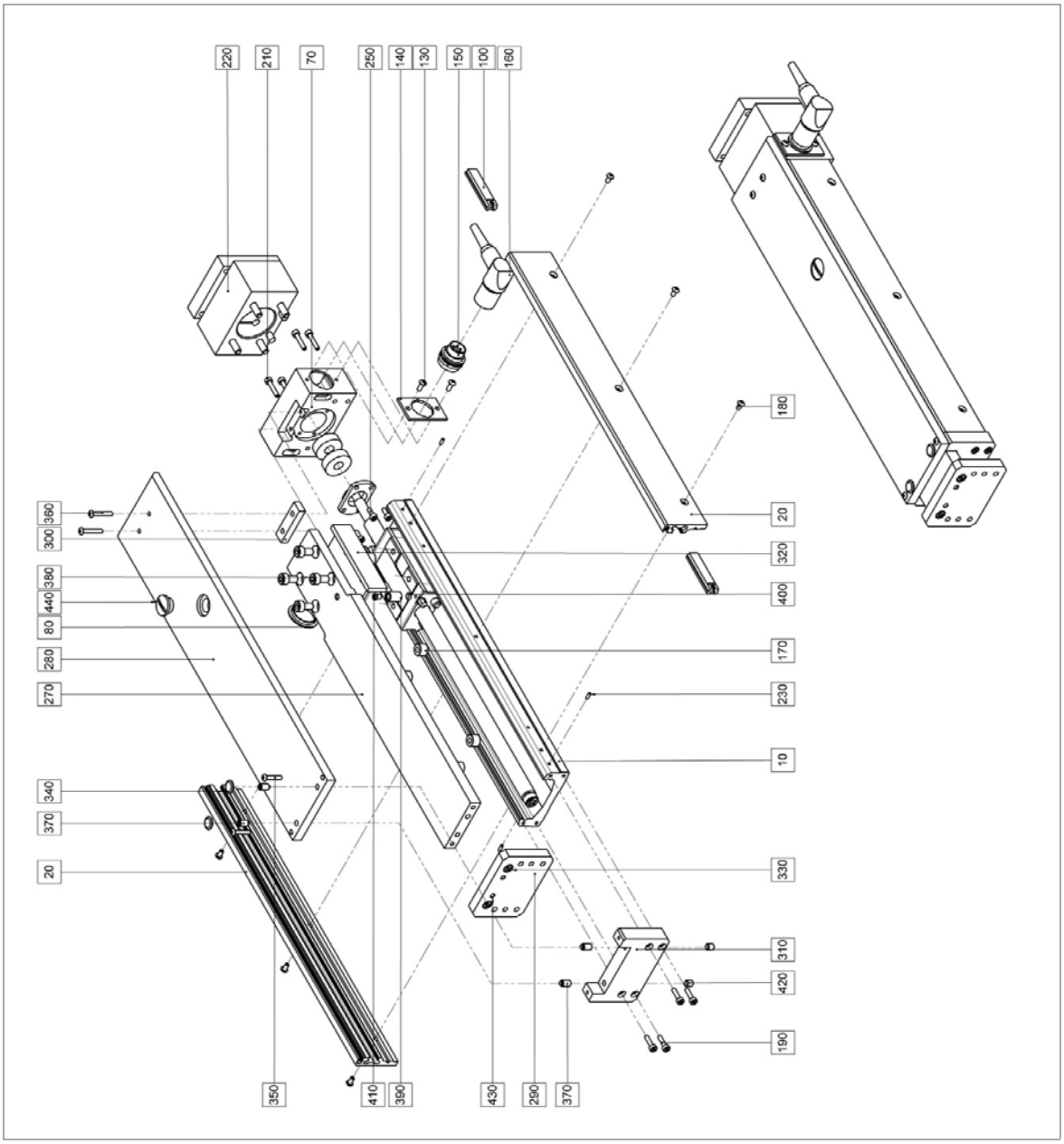

Figure 33 Exploded drawing profiLINE 70 AL

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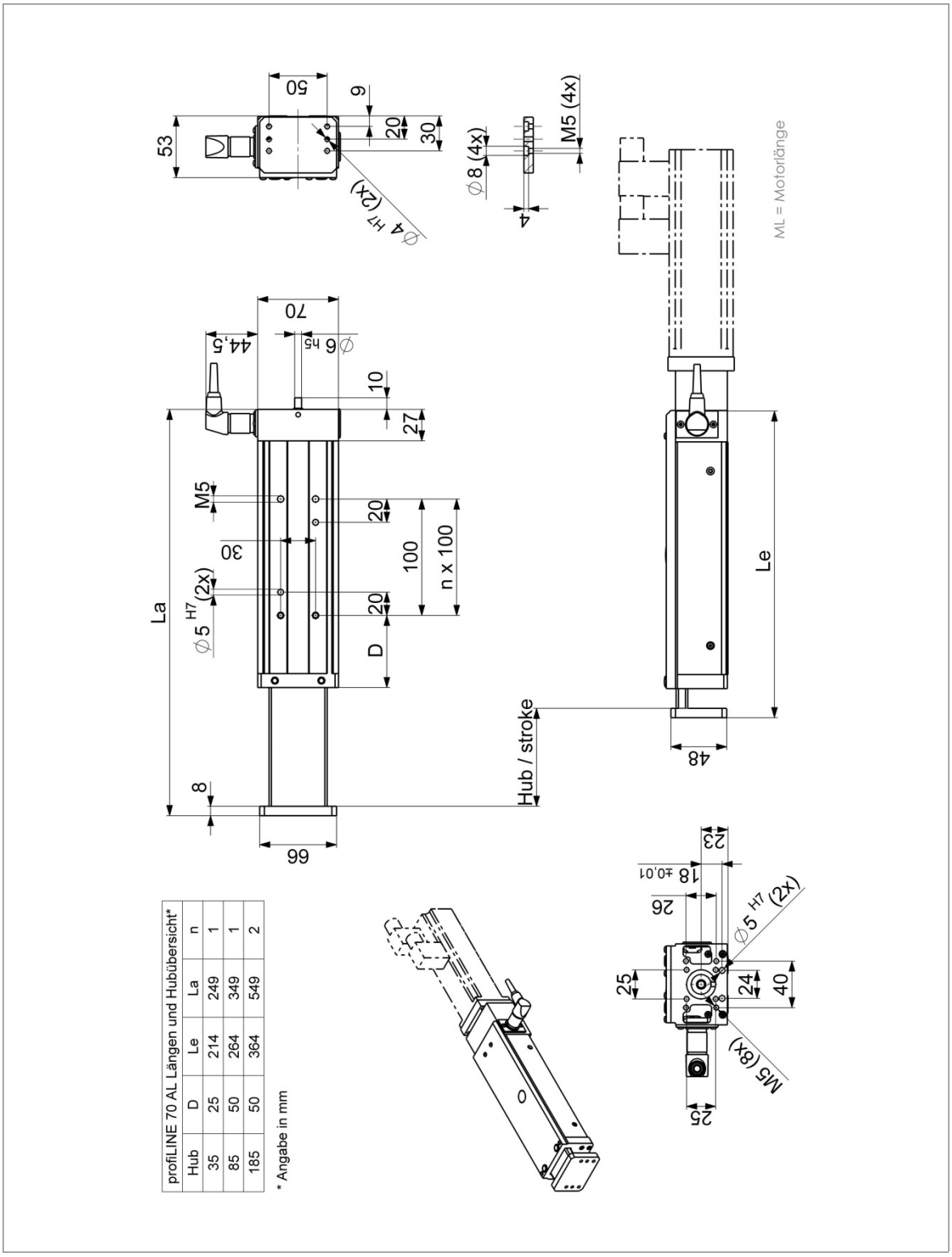
7.2.1 profiLINE 70 AL Attachment Version 5, TG 1000734



profiLINE 70 AL Längen und Hubübersicht*				
Hub	D	Le	La	n
35	25	214	249	1
85	50	264	349	1
185	50	364	549	2

* Angabe in mm

Figure 34 Attachment version 5 profiLINE 70 AL

7.3 Motor Attachment Axial profiLINE 70 and 70 AL, TG1000733

Z-Pos.	Part no.	Designation	E=spare part V=wear part
10	1030826	Interim flange	
20/30/40/45	*)	Flange plate, motor-specific	
50	626621	Cylinder-head screw M5x50	
60	626051	Cylinder pin 5_{m6} x 50	
70	1064061	Coupling half 6^{H7}	E
65-120	*)	Coupling half, motor-specific	E
130	1064068	Sprocket, red	E

+ use depending on design

*) Item no., depending on components used, defined more precisely in customer-specific parts list

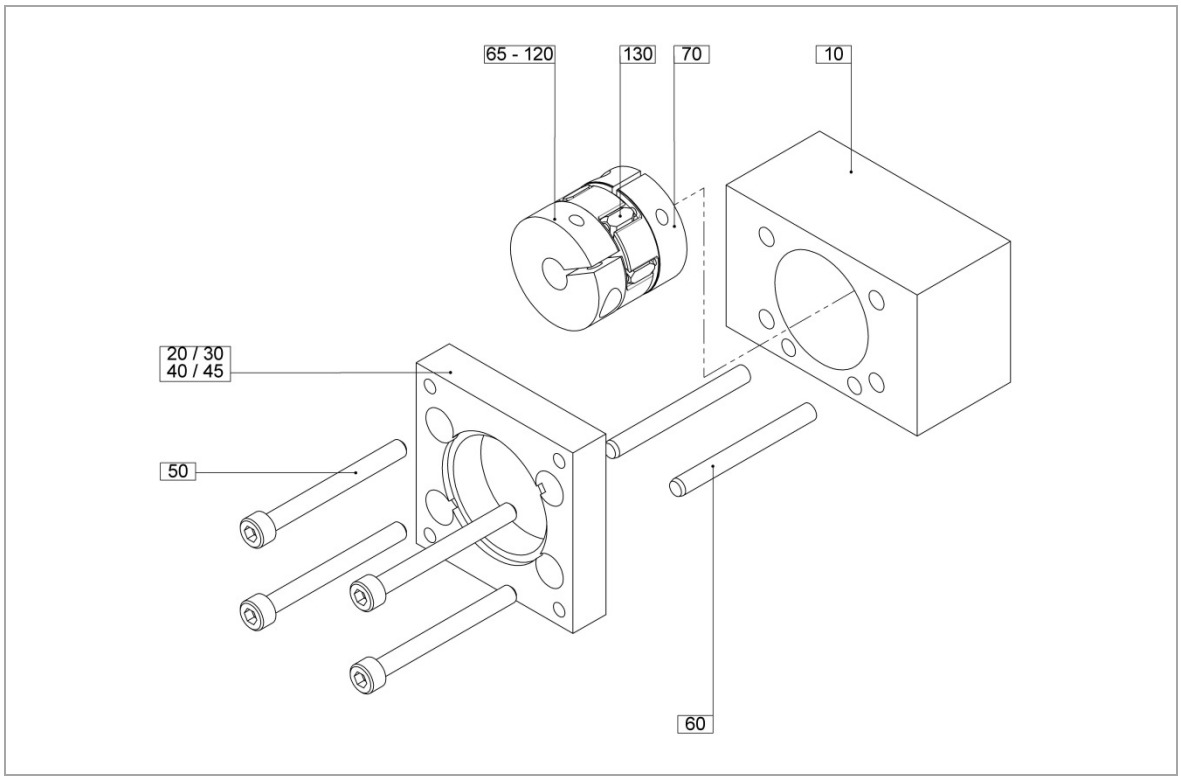


Figure 35 Flange for axial motor attachment, exploded drawing

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7.4 Interim Plate, Part No. 1031426

This interim plate is needed for:

- Cross-installation carriage against basic body
- Cross-installation carriage against carriage (two)

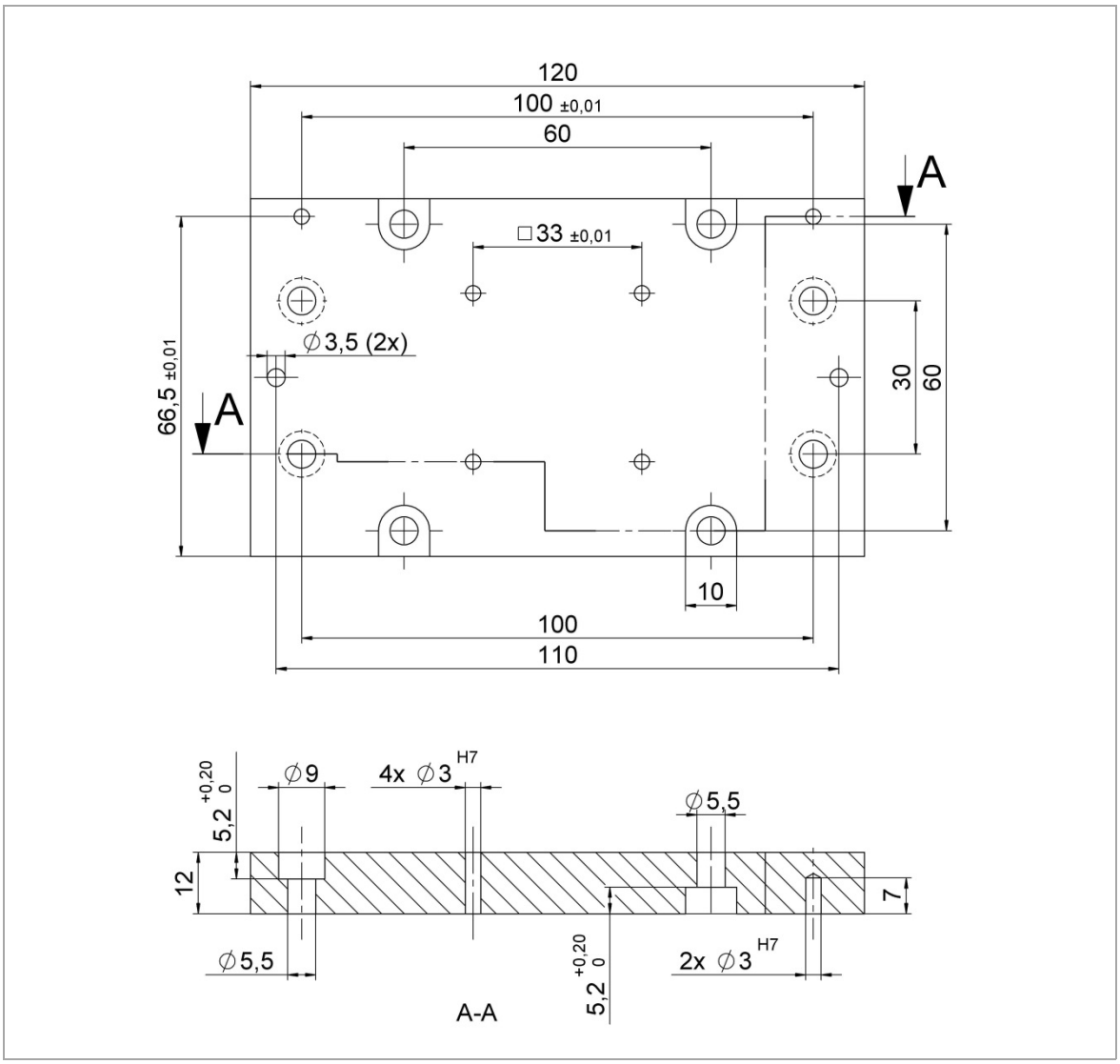

Figure 36 Adapter plate

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