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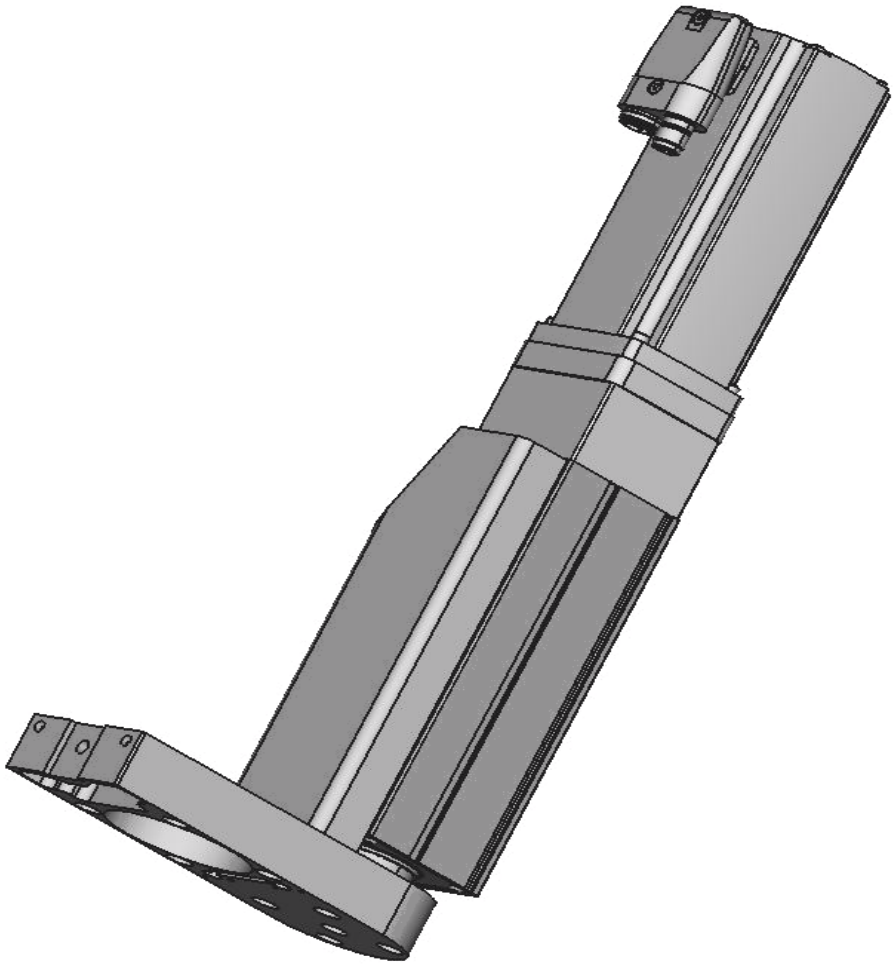


Operating Manual

Linear Feed Unit LFU

Revision history

Revision	Date	Comment	Chapter
01	12.04.2021	Creation	All
02	28.01.2022	Revision of assembly and sealing air specs	5/9
02	28.11.2023	Revision (Style)	All

Service

If you have any technical questions, please contact the following address:

ToolDrives GmbH & Co. KG
Königlicher Wald 6
D-33142 Büren

Tel.: +49 2951 70798 50

Email: info@tooldrives.de

CONTENTS

1. About this manual

1.1 General

- These instructions are intended for all people who work with the Linear Feed Unit. During their work, they must have the operating instructions available and observe the information and notes that apply to them.
- These instructions help you to work safely with the "Linear Feed Unit". It contains safety instructions that you must observe.
- The operating instructions must always be complete and in a perfectly legible condition.
- If supplementary sheets (e.g. for special applications) are enclosed with these instructions, the information contained therein is valid. Contradicting information in this manual is therefore invalid.

The original of this manual was created in German, all other language versions are Translations of these instructions.

1.2 Safety symbols

The following safety symbols are used to draw your attention to dangers, prohibitions and important information:

Danger!

Danger of personal injury from dangerous electrical voltage.
Indicates an imminent danger that can result in death or serious injuries if appropriate actions are not taken.

Danger!

Danger of personal injury from a general source of danger. Indicates an imminent danger that can result in death or serious injuries if appropriate actions are not taken.

Stop!

Risk of property damage.
Indicates a possible danger that could result in property damage if the corresponding actions are not taken.

Hot surface

Risk of burns.
Indicates possible burns when touched with the bare hand.

Information

Important information.
Instructions for trouble-free function and useful tip for easy handling.

2. Safety

2.1 General Information

- The Linear Feed Unit has dangerous, electical parts, rotating parts and hot surfaces during operation.
- All work on transport, connection, commissioning and maintenance must be carried out by qualified, responsible specialist personnel who have read and understood these operating instructions. Improper behavior can cause bad personal injury and property damage.
- The safety instructions and the rules and regulations applicable to the place of use / country of use must be observed. In addition to the safety instructions, the generally applicable legal and other rules and regulations for accident prevention (e.g. personal protective equipment) and environmental protection must be followed.

2.2 EC - Low Voltage Directive

The Linear Feed Unit was built in accordance with directive 2006/95 / EC. All single components used are CE certified. The electrical installation must be carried out in accordance with the relevant regulations (e.g. cable cross-sections, protection).
Compliance with the requirements for an entire system is the responsibility of the manufacturer of the complete system.
The declaration of incorporation can be found in the appendix chap. 10th.

2.3 Dangers

The Linear Feed Unit has been developed and built in accordance with the current state of the art and recognized safety regulations. It may only be used and operated in a technically perfect condition.

Read the information about the general safety instructions before starting work (see chapter 2.7 "General safety instructions").

2.4 Intended use

The Linear Feed Unit

- is intended for use in commercial machines and must **not be used outdoors**.
- is intended exclusively for use in machining centers or as a stationary unit for stationary and through-feed technology and is used to feed drilling, milling and sawing spindles.
- may only be operated with the motor installed on originally scope of delivery.
- to be operated on the Single Servo Controller (SSC) type ToolDrives. Use on other controllers requires the recommendation or approval by **ToolDrives GmbH & Co.KG**, otherwise the guarantee expires.

2.5 Reasonably foreseeable misuse

- Any use that exceeds the maximum permissible values in the technical data, see chapter 9.1 "Technical data", is considered improper and is therefore prohibited.
- The Linear Feed Unit must not be operated in potentially explosive areas.
- For safe operation: the necessary protective devices must be in place, properly installed and fully functional. They may not be removed, changed, bypassed or rendered ineffective.
- In case of emergency stop situations, power supply malfunctions and / or damage to the electrical equipment, the Linear Feed Unit has to
  - be switched off immediately,
  - secured against uncontrolled restart and
  - secured against uncontrolled overrun.

2.6 Warranty and liability

Warranty and liability claims for personal injury or property damage are excluded if

- Failure to observe the instructions for transport and storage;
- improper use (misuse);
- improper or not performed maintenance or repair work;
- opening the Linear Feed Unit;
- improper assembly / disassembly or improper operation;
- operation of the Linear Feed Unit with defective protective devices;
- operation of a heavily dirt Linear Feed Unit;
- changes or conversions without the written approval of **ToolDrives GmbH & Co.KG** were executed.

2.7 General safety instructions

Danger!

Faulty electrical connections or unauthorized electrical components lead to serious injuries and even death.

- Only have all electrical connection work carried out by specialist personnel.
- Replace damaged cables or plugs immediately.

Danger!

Tool movements can pull in body parts and cause serious injuries and even death.

- Do not enter the machine in which the Linear Feed Unit is installed until the machine is completely switched off.
- Secure the machine against restart and unwanted movements during assembly and maintenance work.

Danger!

Loose or overloaded screw connections can cause serious injuries or even death and / or substantial property damage.

- Use a calibrated torque wrench to assemble and check all screw connections for which a tightening torque is specified.

Cutting injuries on tool cutting tools.

- Wear protective gloves when changing the drilling units attached to the LFU.
- Note other tools on the machine.

Hot surface

Hot Linear Feed Unit can cause bad burns.

- Only touch the Linear Feed Unit with protective gloves or after a long switch-off time.

3. Description

The Linear Feed Unit is an electromechanical axis with a protected recirculating ball bearing guide and serves as an extension and feed unit for the ToolDrives Basic and Compact Line spindle drives.

The LFU absorbs forces and moments and the compact ball screw drive ensures smooth spindle operation and permanent lubrication for a long service life.

Ideally, the LFU is used where the smallest installation spaces or the best economic efficiency are required, e.g. in dry machining as a single spindle infeed unit or as a retrofit for cost-effective, energy-efficient replacement of air-driven units.

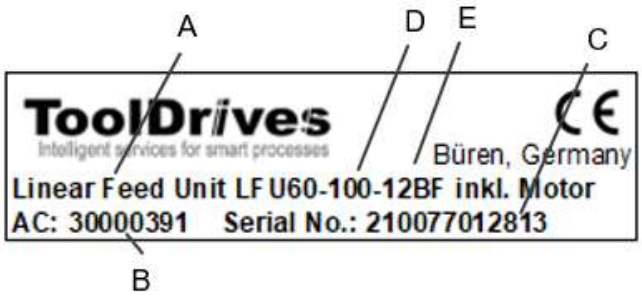
The mounting system with its universal profile attachment enables direct mounting without an additional adapter.

The LFU is driven by a powerful motor that is matched to the customer-specific parameters and may only be operated with the parameterized SSC (Single Server Controller). See chapter 9.1 "Technical data".

The assembly of the LFU is explained in Chapter 5 "Assembly", the dimensions can be found in the respective dimension sheet, see Chapter 9.2. "Dimension sheets".

3.1 Identification Plate

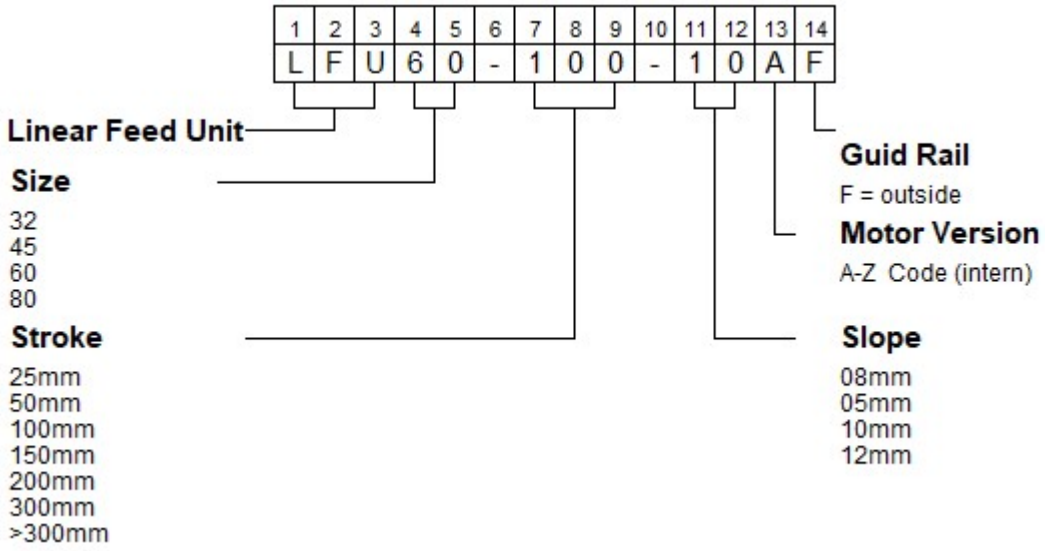
A identification plate is located on each Linear Feed Unit and provides detailed information about its properties.

Identification Plate		Description
	A	Description
	B	Article Code
	C	Serial no.
	D	Stroke
	E	Pitch

Tbl-1: Identification Plate

3.2 Type Code

The structure and functionality of the module is described in the type code



3.3 Order code

The Linear Feed Unit is an individually manufactured product according to customer specifications and only receives an AC code (order code) after configuration. This is then defined exclusively for this configuration and applies to replacement or re-orders of the same configuration. You will receive your individual AC code with the first order and this will then be deposited with us. The AC code can also be found on the LFU identification plate upon delivery.

3.4 General data

The dimensions and connection data of the Linear Feed Unit can be found in the appendix in Chapter 9.1 "Technical data", "and Chapter 9.2" Dimension sheets“.

4. Transport and storage

4.1 Scope of delivery

Scope of delivery include:

1. Linear Feed Unit with adapted motor and the screws for connecting the mounting plate.
2. Linear Feed Unit mounting profile, 2-part.
3. If ordered, the mounting plate with the fastening screws for the Basic or Compact Module.
4. Operation instructions.

Immediately after delivery, check that the delivery is complete using the delivery note.

Missing parts or damage must be reported immediately in writing to the freight forwarder, the insurance company or **ToolDrives GmbH & Co.KG**.

4.2 Optional accessories

Informationen about additional accessories is available from **info@tooldrives.de**

4.3 Packaging

The Linear Feed Unit is delivered packed in boxes.

▶ Dispose of the packaging materials at the designated disposal points. Observe the applicable national regulations for disposal.

4.4 Transport

Stop!

Hard impacts, e.g. dropping or dropping it too hard can damage the Linear Feed Unit.

- Transport the Linear Feed Unit with appropriate care and avoid hard impacts.
- Put the Linear Feed Unit carefully down.

No special mode of transport is prescribed for the transport of the Linear Feed Unit.

For dimensions, see chapter 9.1 "Technical data".

4.5 Storage

Store the Linear Feed Unit

▶ in a horizontal position and in a dry environment at a temperature of +5 ° C to +60 °C,

▶ in an environment without condensing moisture

▶ in the original packaging

▶ maximum 2 years.

For warehouse logistics, we recommend the "first in - first out" principle.

5. Assembly

5.1 Preparations

Danger!

Incorrectly installed Linear Feed Unit can cause serious injuries.

- Mount and operate the Linear Feed Unit only in a suitable machine or at a holder, according to the possible uses of the Linear Feed Unit.
- Comply with the required installation specifications.

Information

To reduce the exposure to dust and chips, we recommend providing an extraction system on the machine.

- Find out about the general safety instructions before starting work. (See chapter 2.7)

5.2 Motor assembly

Usually, the motor is already attached and only needs to be removed in the case of repairs.

Danger!

Electrical parts lead to electric shocks when touched, causing serious injuries and even death.

- Make sure that you only assemble or disassemble the motor when it is disconnected from the power supply.

Information

Please note the following points during assembly:

- Clean / degrease and dry the following components with a grease-dissolving, non-aggressive cleaning agent:
  - Cones
  - Coupling clamping area

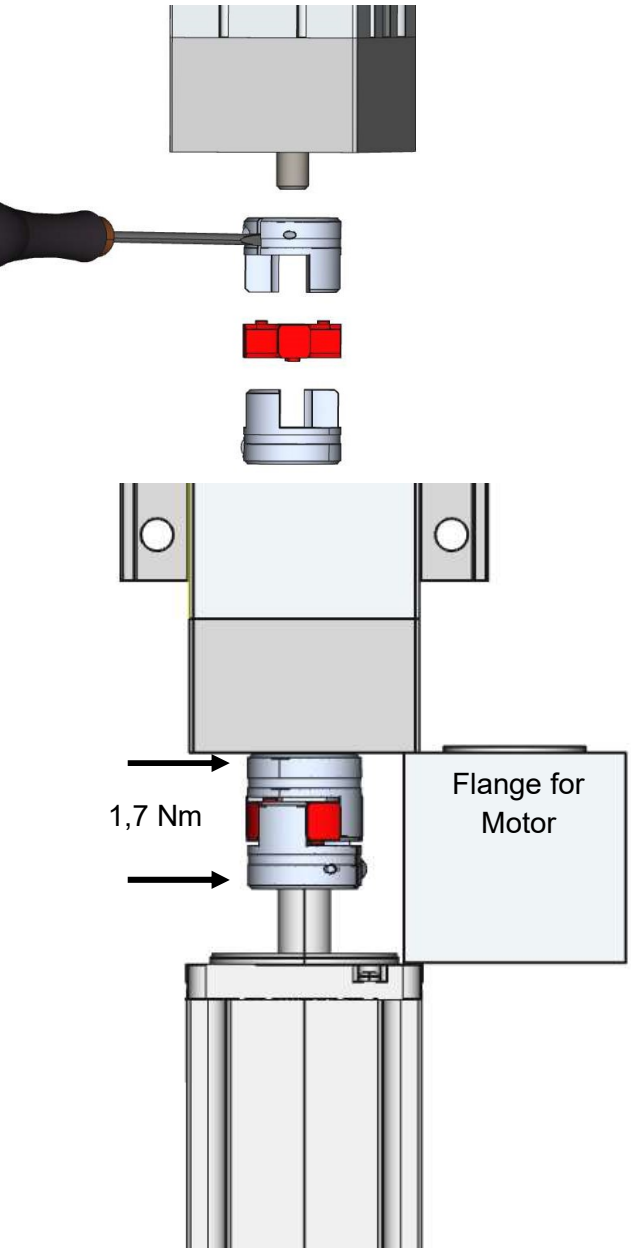
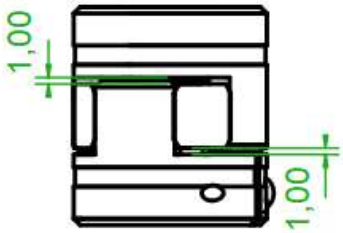


Figure 1 assembly

- Do not use compressed air.
- Dry all contact surfaces to neighboring components in order to obtain the correct coefficients of friction for the joint.
- If necessary, press the coupling hub slightly apart with the aid of a screwdriver.
- Also check the contact surfaces for damage.
- Push the coupling onto the hub of the LFU and tighten the screw on the LFU hub with the appropriate torque. Wet the threaded hole for the screw beforehand with screw locking adhesive (e.g. Loctite® 243).
- Insert the coupling star (red).
- Use the flange for the motor between the LFU and the motor as a spacer and slide the 2nd half of the coupling onto the motor.
- Make sure that the **gap** between the coupling star (red) and the 2 coupling halves is **1mm**.



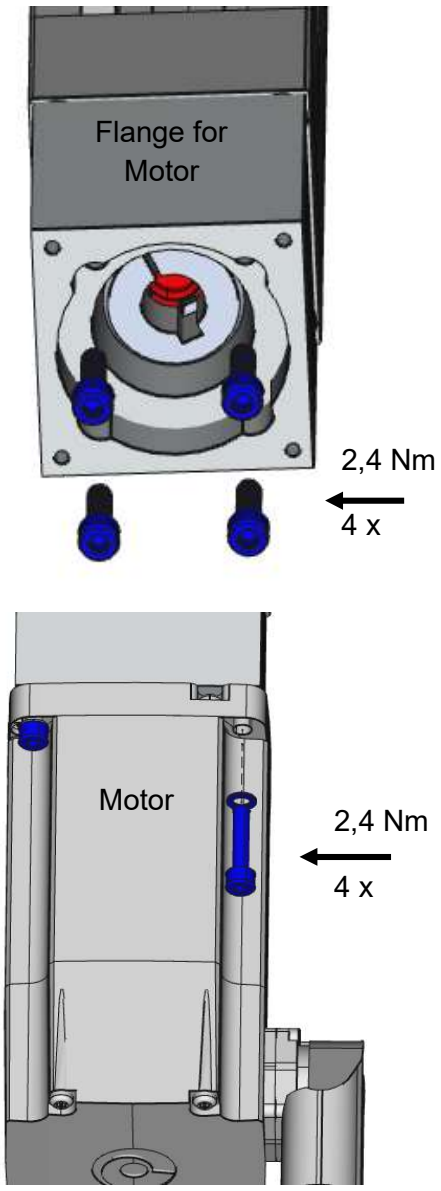


Figure 2 motor assembly

- Tighten the screw on the motor hub with the appropriate torque. Wet the threaded hole for the screw beforehand with screw locking adhesive (e.g. Loctite® 243).
- Installation is the same for systems with or without a keyway.
- Attach the flange for the motor to the LFU and tighten the screws with the appropriate torque. Wet the threaded hole for the screws beforehand with screw locking adhesive (e.g. Loctite® 243).
- Place the motor flange on the LFU and tighten the screws with the appropriate torque. Wet the threaded hole for the screws beforehand with screw locking adhesive (e.g. Loctite® 243).
- Place the motor on the flange and tighten the screws with the appropriate torque. Wet the threaded hole for the screws beforehand with screw locking adhesive (e.g. Loctite® 243).

Information

Tightening torque of fastening screws	
Grub screws	1,7Nm ±10%
Allen screws	2,4Nm ±10%

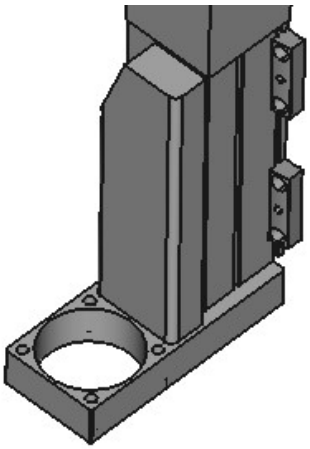
Tbl-2: Tightening torque 1

5.3 Mount the frame

Information

The mounting frame is part of the scope of delivery and already assembled on delivery to ensure a secure screw connection.

- You can request the dimensional drawing with the drilling pattern from info@tooldrives.de.
- In the case of disassembly or replacement by the user, it must be ensured that the mounting frame or the screw-on platform meets the technical requirements (e.g. rigidity, accuracy, etc.). If you have any questions, please contact **ToolDrives GmbH&Co.KG.**
- Fasten the mounting frame or the screw-on platform again with the supplied screws or screws of the same type.
- Tighten the screws to the appropriate torque. Wet the threaded hole for the screws beforehand with screw locking adhesive (e.g. Loctite® 243).
- The pictures in the example show the mounting frame for the compact module without and with suction.
- The installation of Basic or Compact Line Modules can be found in the respective operating instructions.



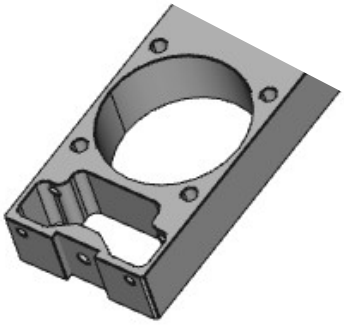


Figure 3 mounting frame

Information

Tightening torque of fastening screws	
Allen screws M5	2,4Nm ±10%
Allen screws M6	4,8Nm ±10%

Tbl-3: Tightening torque 2

5.4 Attach / install Linear Feed Unit (LFU)

Information

Make sure that the intended machine in which the LFU is installed or the mounting plate for e.g. retrofit attachments have the necessary load-bearing capacity to withstand dynamic movements.

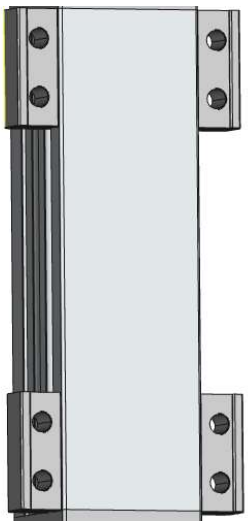


Figure 4 mount LFU and LFUXXF

- Clean the Linear Feed Unit with a paint brush, brush or a clean, lint-free cloth.
- Do not use compressed air.
- Dry all contact surfaces to adjacent components in order to obtain the correct coefficients of friction for the screw connections.
- Also check the contact surfaces for damage.
- Fasten the LFU or LFUXXF with 8 screws and use the corresponding tightening torques of the respective screw strength class with a recommendation of at least 10.9. The screws are not part of the scope of delivery.
- The LFUXXF can also be connected without profile attachments, see Figure 5 "Assembly LFUXXF".
- The required mounting dimensions and accessory information are described in Chapter 9.2.3 "Mounting dimensions".

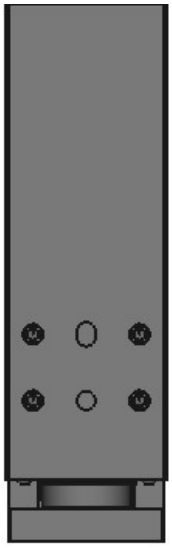


Figure 5 mount LFUXXF

5.5 Connect pneumatics (sealing air)

➔ Only for LFU models with 32F, 45F, 60F sealing air:

When delivered, the LFU is equipped with a filter element in the breathing hole. Air is exchanged between the cylinder interior via the sealing air connection

and the surrounding area. This prevents negative or positive pressure from occurring in the cylinder interior.

Additional functions of the connection:

- Applying slight negative pressure prevents the emission of particles
- Applying slight overpressure prevents the emission of particles. For this purpose, the filter element is replaced by a sealing air connection QS-G1/4-6-I or QS-G1/4-8-I (not included in delivery) see Figure 6.

Danger!

Risk of injury from tearing off compressed air hoses.

- Wear protective glasses when working on the pneumatic system.
- Make sure that the compressed air hose is long enough. Connect the sealing air to the connector.
- Sealing air specification see chapter 9.1.1 "Sealing air".

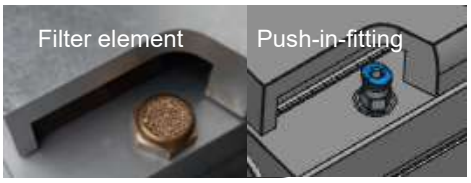


Figure 6 breath or air connection

6. Commissioning

Before starting work, inform yourself about the general safety instructions (see chapter 2.7 "General safety instructions ").

Danger!

Inadequate fastening can cause serious injuries or even death.

- Check the fastenings on the machine before commissioning.
- Do not enter the machine in which the Linear Feed Unit is installed until the machine has been completely switched off.
- Observe the specified maximum speeds of the Linear Feed Unit, see chapter 9.1 "Technical data" and the maximum speed of the clamped tool.
- Suitable protective devices must be available and fully functional. The provision is the responsibility of the manufacturer of an complete system.

Danger!

Hearing damage due to noise pollution.

- Wear suitable protective equipment during commissioning and operation.

Stop!

Improper operation can damage the Linear Feed Unit.

- Only use the Linear Feed Unit up to its maximum limit values, see chapter 9.1 "Technical data".
- For other operating conditions, please contact **ToolDrives GmbH & Co.KG**.
- Use the Linear Feed Unit only in a clean and dry environment.
- Do not use the Linear Feed Unit outdoors.
- Only operate the Linear Feed Unit when it is permanently installed.

6.1 EMC-measurements

Only when operating with a single servo controller (SSC) or dual servo controller (DSC) type ToolDrives do we guarantee that the limit values and the requirements for interference emission and immunity according to EN 61800-3: 2004 will be observed.

When operating the Linear Feed Unit with another servo drive, EMC measurements must be carried out and evaluated.

6.2 Set up Basic or Compact Line Modules

The specifications for equipping the Basic and Compact Line Modules with tools can be found in the respective operating instructions.

7. Maintenance / disposal

Find out about the general safety instructions before starting work (see chapter 2.7 "General safety instructions ").

Stop!

Parts damage due to incorrectly performed maintenance work.

- Repair and maintenance work may only be carried out by qualified specialists.
- During repair and maintenance work, pull the supply plug on the Linear Feed Unit to de-energize it.
- Do not use a steam jet, compressed air or similar to clean the Linear Feed Unit.
- Never bring cleanser inside the Linear Feed Unit.
- Clean the Linear Feed Unit with a paintbrush, a brush or a lint-free cloth.
- Do not open the Linear Feed Unit.

Danger!

Cut injuries on tool cutting edges.

- Disassemble the tools before maintenance.
- Note other tools on the machine.
- Wear protective gloves when dismantling the tools.

7.1 Maintenance work

The Linear Feed Unit is low-maintenance. Regular visual inspections and maintenance are still required in order to detect any damage at an early stage.

7.1.1 Lubrication

➔ Not for types 32F, 45F, 60F

The Linear Feed Unit is provided with the required amount of lubricant at the factory. For models that require relubrication (see maintenance plan, chap. 7.4.), Take the following steps.

Information

Make sure that the specified amount of grease is not exceeded in order to avoid grease leakage and subsequent contamination.

- Remove the cover cap 1.
- Move the LFU until the grease nipple is visible in the maintenance hole.
- Lubricate with the grease gun according to the following table.

Figure 7 lubrication

Type	Thread	Regreasing	Operating hours
60	Kg 16X5	0,84g	500
60	Kg 16X10	1,33g	500
80	Kg 25x5	2,00 g	500
80	Kg 25x10	3,00 g	500
32F	-	-	-
45F	-	-	-
60F	-	-	-

Tbl-4: lubrication

7.1.2 Visual inspection

Danger!

Risk of injury from tearing off compressed air hoses.

- Maintain and check compressed air hoses and screw connections regularly. Only for LFU models with sealing air.
- Wear safety glasses when working on the pneumatic system.
- Check the Linear Feed Unit, all supply lines and connectors for external damage.
- Check whether the identification plate (see chapter 3.1 "Identification plate") is present and legible.

7.1.3 Cleaning

Only clean the outside of the Linear Feed Unit with a brush or with a clean, lint-free cloth. Remove any chips from the Linear Feed Unit.

7.2 Check the tightening torques of the fastening screws

Check the tightening torques of the Linear Feed Unit fastening screws in the machine and on the mounting frame. Please note that if the screws are loose, they must be reassembled as described in Chapter 5 "Assembly".

Danger!

Parts can be thrown out by loosened base module fastening screws and cause serious injuries.

The tightening torque of the fastening screws can also be found in Chapter 5 “Installation“.

7.3 Commissioning after maintenance

Information

Commissioning after maintenance.

- Remove objects and tools from the vicinity of the LFU before starting commissioning.
- Install all safety devices.
- Connect the motor connection line and the compressed air hoses.
- Proceed as described in chapter 6.

7.4 Maintenance schedule

Maintenance work	When starting up	Weekly	very 500 operating hours or every 3 months
Visual inspection (see chapter 7.1.2)	X		X
Check the tightening torques (see chap. 7.2)	X	X	
Cleaning (see chapter 7.1.3)	X	X*	
Lucrication (see chapter 7.1.1)			X*
* or more often, depending on the place of use and the operating conditions			

Tbl-5: Maintenance schedule

7.5 Disposal

Additional information on disassembly and disposal of the Linear Feed Unit is available from our customer service.

- ▶ Please dispose of cardboard boxes in the waste paper, other packaging materials in the designated disposal points.
- ▶ Dispose of the Linear Feed Unit at the designated disposal points (electronic components included).
- ▶ Observe the applicable national regulations for disposal.

7.6 Spare parts AC codes

Due to the wide range of possible combinations with the Linear Feed Unit, incorrect determinations may occur when ordering spare parts. Because of this, please tell us the AC code on your nameplate if you need spare parts and we will put together your individual spare parts information for you. To do this, contact service@tooldrives.de.

8. Interruptions

8.1 In general

Stop!

A changed operating behavior can be an indication of existing damage to the Linear Feed Unit or cause damage to the Linear Feed Unit.

- Do not put the Linear Feed Unit back into operation until the cause of the error has been eliminated.
- Faults may only be repaired by trained specialists.

8.2 Errors - possible causes - remedies

Errors	Possible causes	Remedies
Increased operating temperature	Ambient temperature too high, cooling too low	Make sure there is sufficient cooling and remove accumulations of chips.
	Overload	Reduce the feed rate, lengthen the machining cycle.
	Tool cutting edge on the tool worn, damaged, encrusted	Exchange the tool.
	No sealing air or insufficient flow	Provide the sealing air supply according to the instructions.
	No lubrication	Check your maintenance interval for LFU units with lubrication.
Increased operating noise	Defective spindle	Replace the Linear Feed Unit.
	Tool holder loose	Check the tool holder (observe tightening torques).
	Bearing damage	Get in touch with our
	Fixing screws loosened	Customer Service on.
Collision	-	Check the screw connections and, if necessary, tighten them according to the instructions.
Motor does not turn	no electrical connection	Get in contact with our customer service.
	Dirt entry in the sealing system	Check the plug fit and the motor lead.
Motor stops during processing	Overload	Get in contact with our customer service.

Tbl-6: Inerruptions

9. Appendix

9.1 Technical Data

Size		32F	45F	60F	60	80
Working stroke	[mm]	25 50 75 100	25 50 75 100 125 150	25 50 75 100 125 150 200	25 50 75 100 125 150 200 300 >300*	25 50 75 100 125 150 200 300 >300*
Guide for payload	[kg]	2	6	10	30	60
Max. Feed force F_x	[N]	60	120	250	1200	2500
Idle drive torque	[Nm]	0,042	0,1	0,306	0,4	0,6
Max. Radial force[1)]	[N]	75	180	230	800	1400
Max. Speed	[1/min]	3750	3600	3000	4000	3000
Max. Acceleration	[m/s²]	15				
Repeatability	[mm]	±0,015				
Reversing backlash	[mm]	š 0,15				
Pitch accuracy	[mm]	0,05				
Diameter spindle	[mm]	8	10	12	16	25
Pitch	[mm]	8	10	12	5,10	5,10
Tension	[V DC]	320		320		
Rated capacity	[W]	150		320		
Nominal torque	[Nm]	0,2		0,8		
Peak torque	[Nm]	0,8		2,4		
Ambient temperature[1)]	[°C]	0 ... +50				
Protection class		IP40				
Duty cycle	[%]	100				
Maintenance interval		Lifetime lubrication			Interval lubrication	
Air		Yes			Optional	
Encoder with SIL encoder		Yes				
Brake*		Optional				
Guide		Recirculating ball bearing guide				
Mounting position		any				
Basic weight with 0 mm stroke	[g]	331	608	1555	2420	5070
Additional weight per 10 mm stroke	[g]	30	63	95	96	150
Motor weight surcharge	[g]	700-1000		1400-2200		

* customer-specific changes possible

Information on weights and dimensions serve as a guide and may vary.

9.1.4 Sealing air> (specification)

For connectors for sealing air hose:

	32F	45F	60F
Threat	M5	G1/8	G1/4
Hose diameter	Ø3 or Ø4	Ø4 or Ø6	Ø6 or Ø8

Description	Unit	32F	45F	60F
Operating pressure On the input side on the connector	bar	0,3 – 0,5		
Sealing air quality DIN ISO 8573-1		free of dirt, oil and water		
Filter class 1 DIN ISO 8573-1	□m	0,01		
Sealing air volume flow Q_N	l/min	12,5		

Tbl-8: Sperrluftspezifikation

9.1.5 Motor connection cable

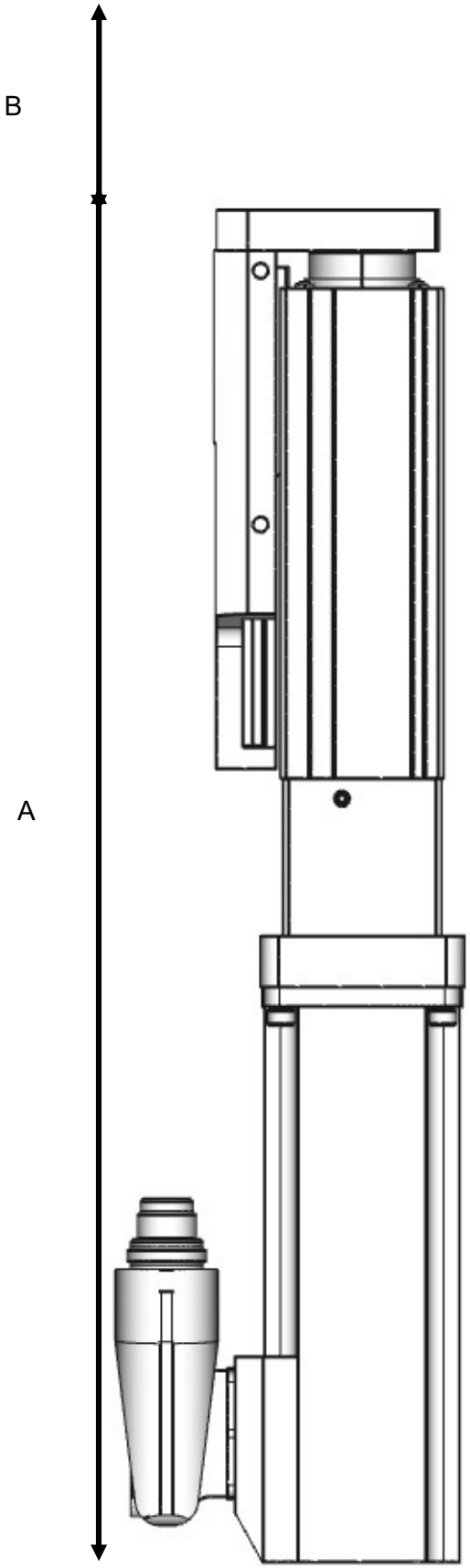
The cables for the motor connection depend on the motor type used, the Linear Feed Unit and the single servo controller. For the exact specification of the assignment for a new or reorder, we need the following data:

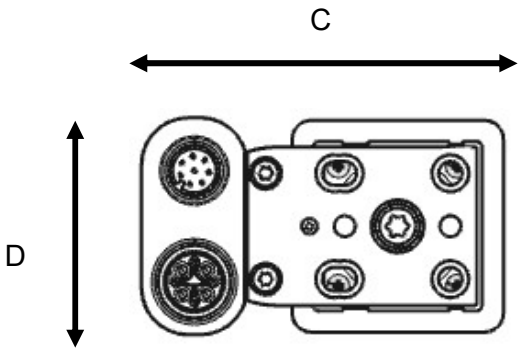
- AC code of the Linear Feed Unit that is in use.
- AC code of the single servo controller (SSC) that controls the motor.
- Required cable length! E.g .: 3, 5, 10, 15m.

We will give you the AC code (order code) of the pre-assembled cables or provide assistance for any occupancy checks. Please contact us via service@tooldrives.de.

9.2 Dimension sheets

9.2.1 Type 32F, 45F, 60F





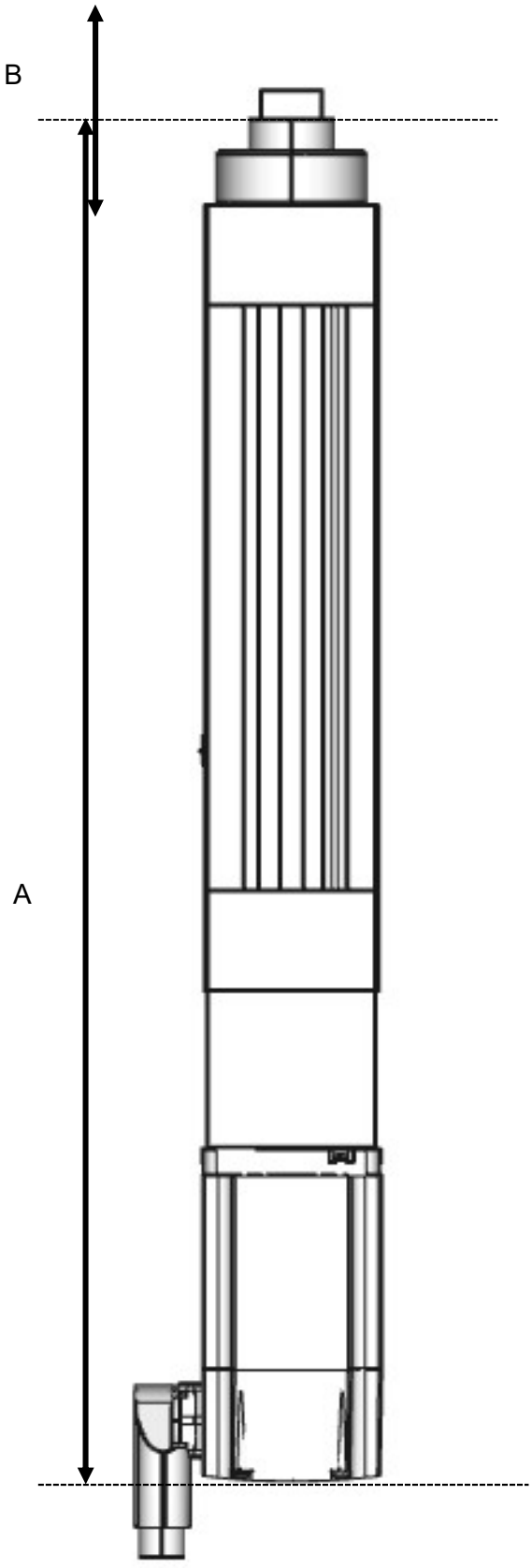
Dimension (mm)	32F	45F	60F
X = Base length	217	229	303
A	X Plus stroke	X Plus stroke	X Plus stroke
B	Stroke	Stroke	Stroke
C	69	69	84
D	40	45	62
Add 20mm for motor with break			

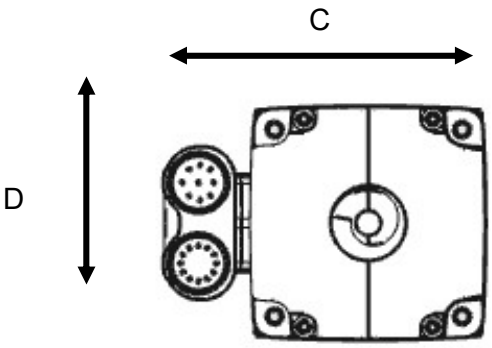
Tbl-9: Dimesions 1

Explanation:
Dimension A: Add the working stroke length e.g .: 50mm to the basic length.
Dimension B: Describes the maximum distance that the LFU can extend, corresponds to the working stroke length, see chapter 9.1.

Note:
The dimensions serve as a guide and may vary. Please contact us for further details or CAD models at info@tooldrives.de.

9.2.2 Type 60, 80





Pitch 05

Dimension (mm)	60	80
X =	340	405
Base length	X Plus stroke	X Plus stroke
A	Stroke	Stroke
B	86	96
C	60	80
Add 20mm for motor with break		

Tbl-10: Dimesions 2

Pitch 10

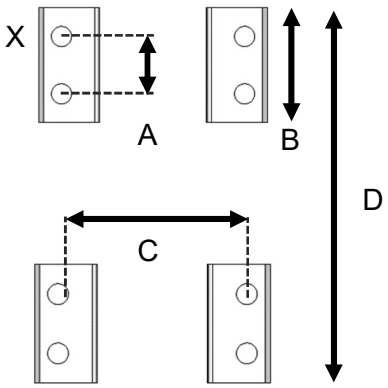
Dimension (mm)	60	80
X =	350	424
Base length	X Plus stroke	X Plus stroke
A	Stroke	Stroke
B	86	96
C	60	80
Add 20mm for motor with break		

Tbl-11: Dimensions 3

Explanation:
Dimension A: Add the working stroke length e.g .: 50mm to the basic length.
Dimension B: Describes the maximum distance that the LFU can extend, corresponds to the working stroke length, see chapter 9.1.

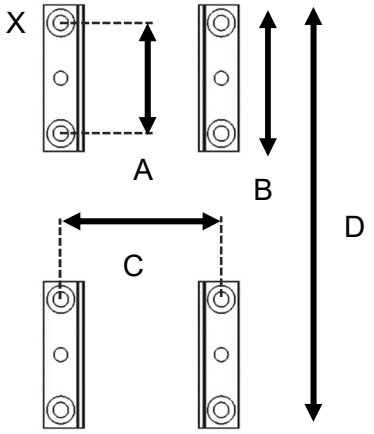
Note:
The dimensions serve as a guide and may vary. Please contact us for further details or CAD models at info@tooldrives.de.

9.2.3 Mounting dimensions



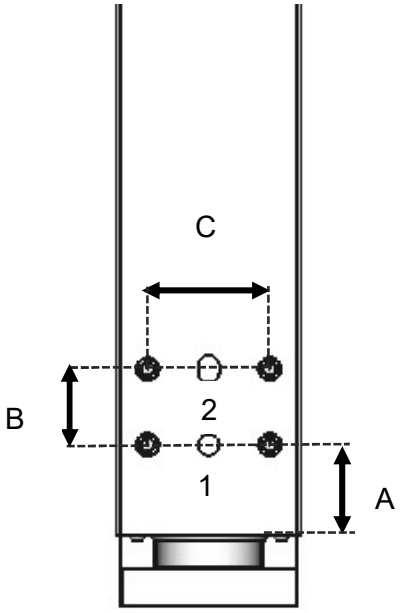
For LFU60 and LFU80 profile fastening

Dimension (mm)	60	80
X = Ø	8,5 for M8	8,5 for M8
A mm	24	32
B mm	48	64
C mm	77	97
D max	105 plus stroke	113 plus stroke



For LFU32F, 45F, 60F profile fastening

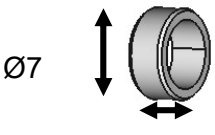
Dimension (mm)	32F	45F	60F
X = Ø	4,5 for M4	5,5 for M5	5,5 for M5
A mm	40	40	40
B mm	53	53	53
C mm	42	58	73
D max	46,5 plus stroke	54,5 plus stroke	79,5 plus stroke



Nur für LFU32F, 45F, 60F

Size	32F	45F	60F
Thread 4St.	M4	M5	M5
With centering		Ø7x1,8	Ø7x1,8
Pin hole 1	Ø4x2,6	Ø5x1,6	Ø7x1,6
Pin hole 2	Ø4x2,6xL2	Ø4x2,6xL2	Ø4x2,6xL2
Screw-in depth	8,5	7	8
Tightening torque	3,2 Nm	3,4 Nm	3,4 Nm
A mm	16,5	17,5	30
B mm	18	24	24
C mm	20	25	40

For 45F,60F



for 32F centering Ø4x5

10. Declaration

ToolDrives Intelligent services for smart processes

ToolDrives GmbH & Co.KG
Landwehr 17
59964 Medebach
Phone +49 2981 5080307

DE – EINBAUERKLÄRUNG FÜR UNVOLLSTÄNDIGE MASCHINEN
gem. Anh. II 1. B der RL für Maschinen 2006/42/EG
EN – DECLARATION OF INCORPORATION FOR INCOMPLETE MACHINES
acc. to app. II 1. B Directive 2006/42/EC on machinery

Wir erklären, dass das nebenstehend angegebene Produkt ... We declare that the product specified here ...	**Linear Feed Unit** LFUXXX...
Serial no.	Diverse
... den grundlegenden Anforderungen der folgenden Richtlinien entspricht ... complies with the basic requirements of the following directives	2006/42/EC Machinery Directive

...und zum Einbau / Zusammenbau in eine / mit anderen Maschinen bestimmt ist. Die Inbetriebnahme der unvollständigen Maschine wird so lange untersagt, bis die unvollständige Maschine in eine Maschine eingebaut wurde, die den Bestimmungen der EG-Maschinenrichtlinie 2006/42/EG entspricht und für die eine EG-Konformitätserklärung gemäß Anhang II A vorliegt. Ferner erklären wir, dass die speziellen technischen Unterlagen für diese unvollständige Maschine nach Anhang VII Teil B erstellt wurden und verpflichten uns, diese auf Verlangen den Marktaufsichtsbehörden über unseren Bevollmächtigten für die Zusammenstellung der technischen Unterlagen zu übermitteln.

... and is intended for installation / assembly in a / with other machine(s). Commissioning of the incomplete machine is prohibited until such time that the incomplete machine has been incorporated in a machine that complies with the EC Machinery Directive 2006/42/EC and for which there is an EC Declaration of Conformity in accordance with Appendix II A. We furthermore declare that the special technical documentation for the incomplete machine is in accordance with Appendix VII Part B. We undertake to have it passed on to the market surveillance body upon request by our representative for the compilation the technical documentation.

Die folgenden Abschnitte des Anhangs I der Richtlinie 2006/42/EG wurden eingehalten: The following Sections of Appendix I of Directive 2006/42/EC have been fulfilled:	1.1.1-1.1.3, 1.3.2-1.3.4, 1.3.6-1.3.9,1.5.1, 1.5.2, 1.5.4, 1.5.5, 1.5.8-1.5.11, 1.5.13, 1.6.1, 1.6.4, 1.7.1.1, 1.7.2-1.7.4, 3.6.1-3.6.3
Angewandte harmonisierte Normen sind: Applied harmonized standards are:	DIN EN ISO 1210
Bevollmächtigter für die Zusammenstellung der technischen Unterlagen Name and address of the person authorised to compile the technical file	Birgit Kornmann ToolDrives GmbH & Co.Kg Landwehr 17 D-59964 Medebach, German
Datum / Hersteller-Unterschrift Date / Signature	April 12,2021 Volker Meier
Funktion des Unterzeichners Job Function	Geschäftsführer / General Manager

ToolDrives

Intelligent services for smart processes

ToolDrives GmbH & Co. KG
Königlicher Wald 6
33142 Büren

Phone: +49 2951 70798 50
Mail: info@tooldrives.de