

Operator's manual



TruTool F 140 (2A1)

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1. Safety

1.1 General safety information

WARNING

Read all safety warnings and all instructions.

- Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury
- Save all warnings and instructions for future reference.

DANGER

Electrical voltage! Risk of fatal injury due to electric shock!

- Remove the plug from the plug socket before undertaking any maintenance work on the machine.
- Check the plug, cable and machine for damage each time before using the machine.
- Keep the machine dry and do not operate it in damp rooms.
- Connect the fault current (FI) circuit breaker with a maximum breaking current of 30 mA when using the electric tool outside.
- Only use original TRUMPF accessories.

WARNING

Damage to the machine due to improper handling.

- Wear safety glasses, hearing protection, breathing protection, protective gloves and working shoes when working.
- Connect the plug only when the machine is switched off. Pull the power plug after use.
- Do not carry the machine by the cable.
- Have maintenance carried out by specialists.

1.2 Specific safety information for shears

DANGER

Electrical voltage! Risk of fatal injury due to electric shock!

- Always keep the power cable behind the device and do not pull it over sharp edges.
- Do not perform any work that may cause the machine to come into contact with hidden power lines or its own cable. Contact with a live conductor can cause metallic machine parts to become live and can lead to an electric shock.



 WARNING**Risk of injury to hands.**

- Do not reach into the processing line with your hands.
 - Use both hands to hold the machine.
-

2. Description

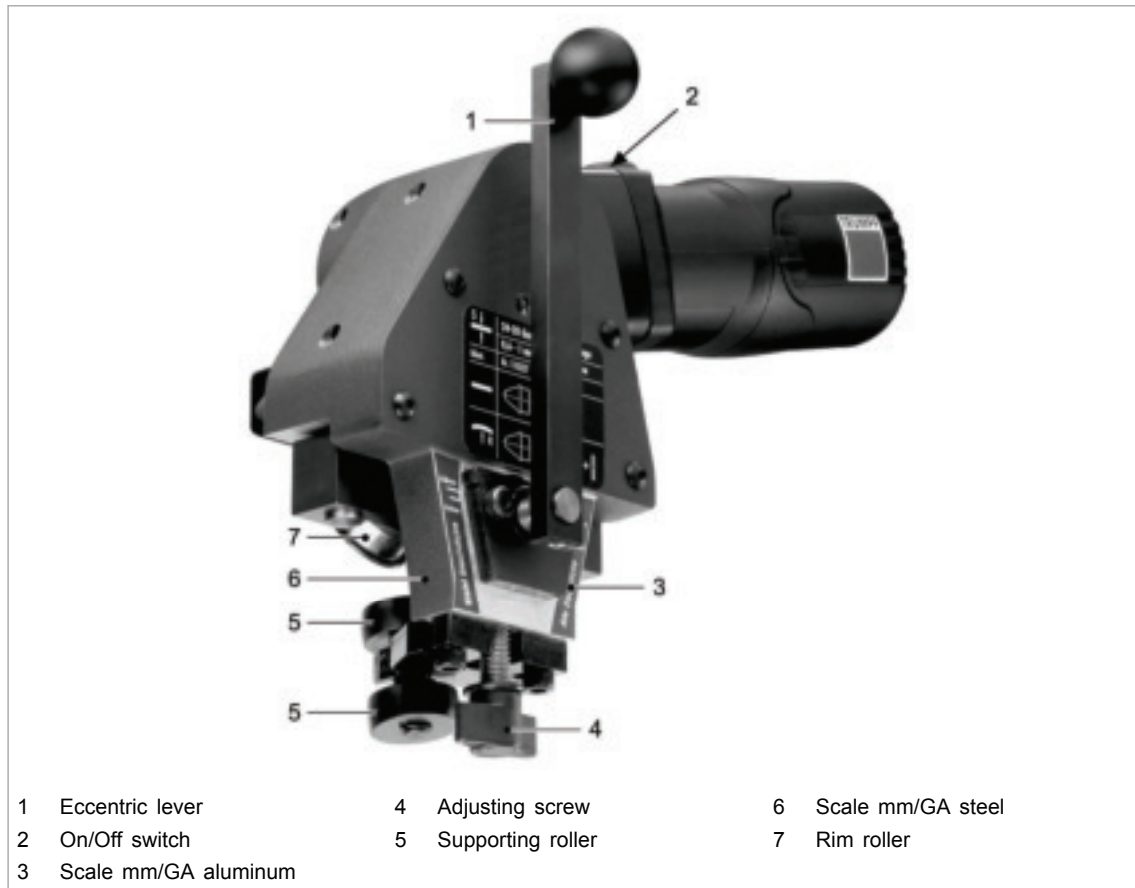


Fig. 38119

2.1 Intended use

⚠ WARNING

Damage to the machine due to improper handling.

- Only use the machine for work and materials as described under "Intended use."

The TRUMPF seam locker TruTool F 140 (2A1) is an electrically powered hand-held device designed for the following applications:

- The closing of Pittsburgh lock seams on correspondingly pre-machined workpieces such as ventilation channels, housings, containers etc.

Note

The seam can be closed on straight or curved contours.

2.2 Technical data

	Other countries			USA
	Values			
Voltage	230 V	120 V	110 V	120 V
Frequency	50/60 Hz	50/60 Hz	50 Hz	50/60 Hz
Working speed	6 - 10 m/min			20 - 32 ft/min
Nominal power consumption	550 W	500 W		
Speed when idling n ₀	150/min			
Weight	4.3 kg			9.49 lbs
Safety class	II / 			

Tab. 1

Acceptable material thickness	
	TruTool F 140 (2A1)
Steel up to 400 N/mm ²	0.6 - 1.4 mm 0.024 - 0.04 in 24 - 17 gauge
Steel up to 600 N/mm ²	0.6 mm 0.024 in 24 gauge
Inner radii	min. 300 mm min. 11.8 in
Outer radii	min. 500 mm min. 19.7 in

Tab. 2

2.3 Icons

Note

The following symbols are important for reading and understanding the operator's manual. The correct interpretation of the symbols will help you operate the machine better and safer.

Icon	Name	Meaning
	Read operator's manual	Read the operator's manual and safety information in their entirety before starting up the machine. Closely follow the instructions given.
	Safety class II	Indicates a doubly insulated tool.
	Alternating current	Type or property of current
V	Volt	Voltage
A	Ampere	Current, current input
Hz	Hertz	Frequency (oscillations per second)

Icon	Name	Meaning
W	Watt	Power, power input
mm	Millimeters	Dimensions e.g.: material thickness, chamfer length
in	Inch	Dimensions e.g.: material thickness, chamfer length
n_0	Idle speed	Revolution speed without load
.../min	Revolutions/strokes per minute	Revolution speed, stroke rate per minute

Tab. 3

2.4 Noise and vibration information

WARNING

Noise emission value may be exceeded.

- Wear hearing protection.

WARNING

The vibration emission value can be exceeded!

- Select the right tools and exchange them in time in the event of wear.
- Have maintenance carried out by trained specialized technicians.
- Define additional safety measures for protecting the operator from the effect of vibrations (e. g. keep hands warm, organization of working procedures, machining at normal feed force).
- Depending on the operating conditions and state of the electric tool, the actual load might be higher or lower than the specified measured value.

Notes

- The specified vibration emission value was measured in accordance with a standardized testing procedure and can be used to compare one electric tool with another.
- The specified vibration emission value can also be applied for a provisional estimate of the vibration load.
- Times during which either the machine is switched off or running but not actually in use can considerably reduce the vibration load during the entire working period.
- Times during which the machine works independently and self-propelled do not have to be calculated.

Designation of measured value	Unit	Value according to EN 60745
Vibration emission value a_h (vector sum of three directions)	m/s ²	≤2.5
Uncertainty K for vibration emission value	m/s ²	1.5
A-class acoustic pressure level L_{pA} typically	dB (A)	80
A-class acoustic power level L_{WA} typically	dB (A)	91
Uncertainty K for noise emission value	dB	3

Tab. 4

3. Folding

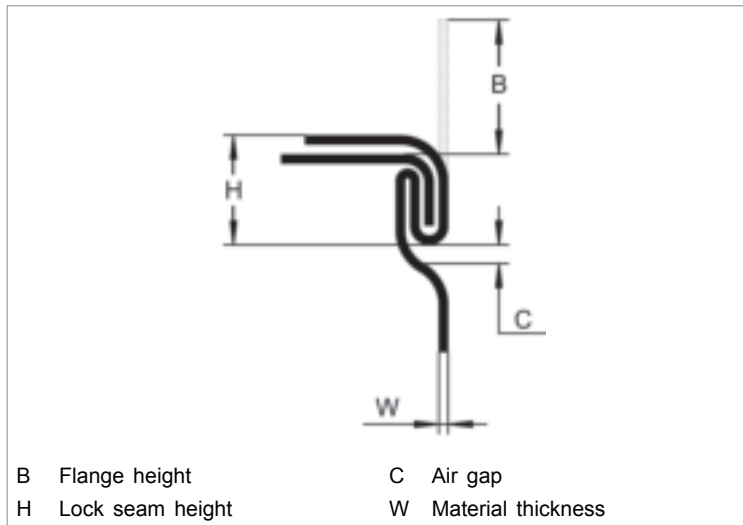


Fig. 47284

Lock seam geometry "Pittsburgh lock seam"

Sheet thickness range mm	B mm	H mm	C mm
0.6 - 1.0	8 - 10	10 - 15	2.5
≥1.0 - 1.4	10 - 12		

Tab. 5

Sheet thickness range		B	H	C
in	Gauge	in	in	in
0.024 - 0.04	24 - 20	0.31 - 0.39	0.39 - 0.59	0.08
0.04 - 0.055	20 - 17	0.4 - 0.55		

Tab. 6

Note

The seam quality essentially depends upon the flange height B. If B is too small, the seam cannot be properly closed. If the Pittsburgh lock seam machine is set to a sheet thickness of 1.25 mm, then the correct flange height B will automatically result for all thin sheets.

Rim and shaping rollers

The rim rollers (14) guide the machine along the workpiece. For a good result, sufficient space for the rollers is required.

The shaping roller (6) bends a flange up. A minimum flange height is required for this.



Fig. 10168

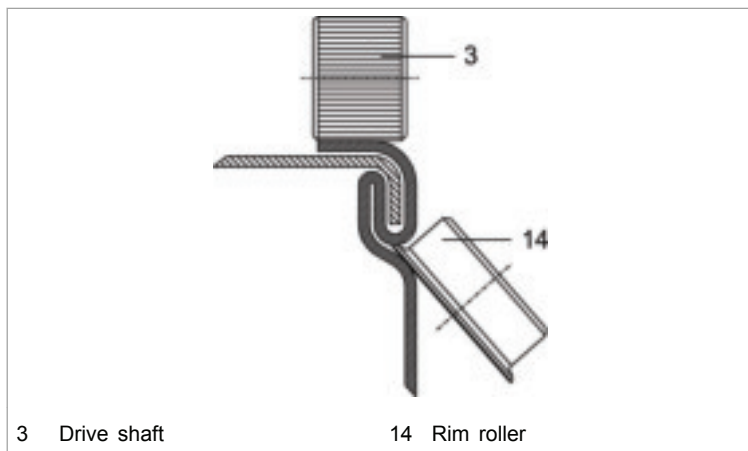


Fig. 10169

4. Setting work

4.1 Selecting the roller

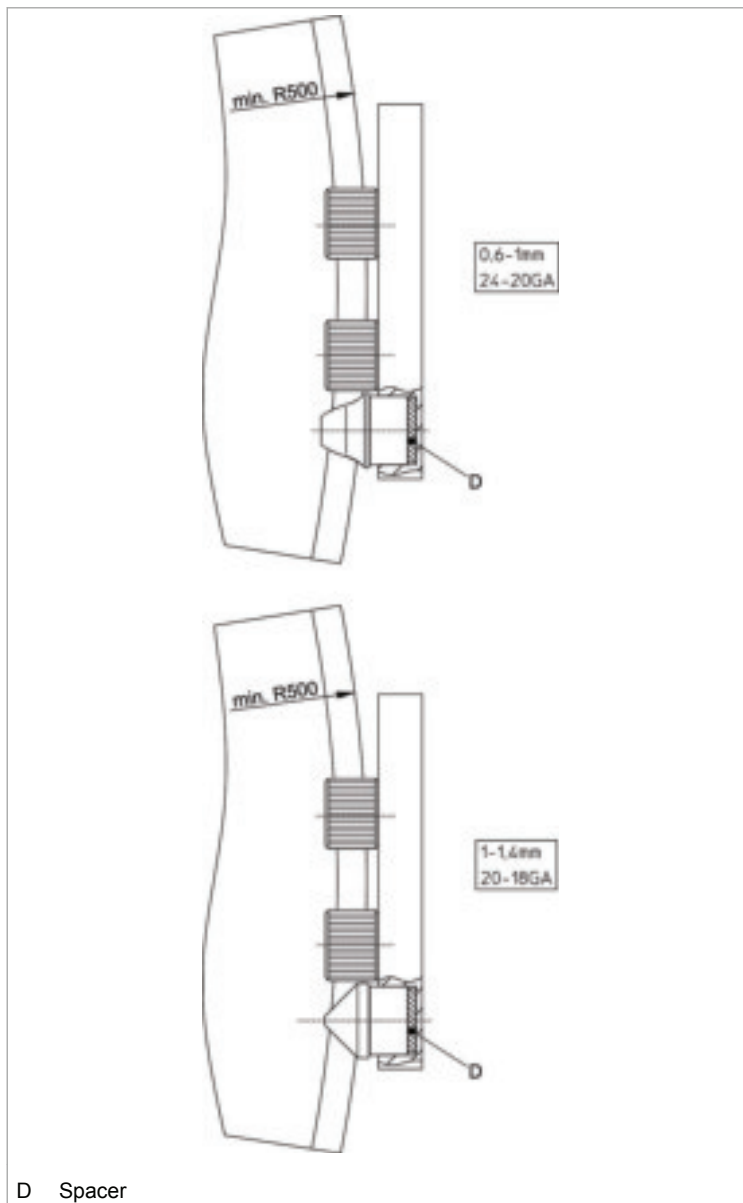
The roller should be chosen according to the thickness of the material.

	24–20GA	20–18GA
	0,6–1mm	1–1,4mm
B	110327	110331
		
		

B Order number GA gauge
 s Material thickness

Fig. 10171

4.2 Machining inner radii



D Spacer

Machining curved radii

Fig. 10172

The spacers supplied with the rollers are needed to set up the machine to "Close radii".

Via the 2 driving rollers, the machine is driven tangentially to the curved workpiece. To correctly position the rollers in this situation, a spacer must be fitted underneath them.

4.3 Setting the tilt

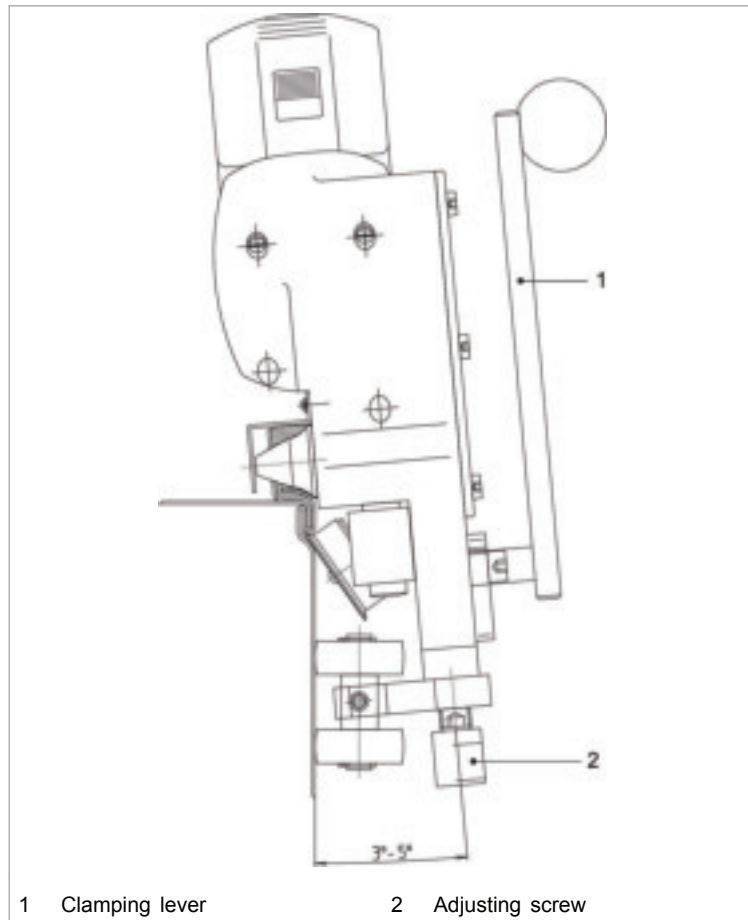


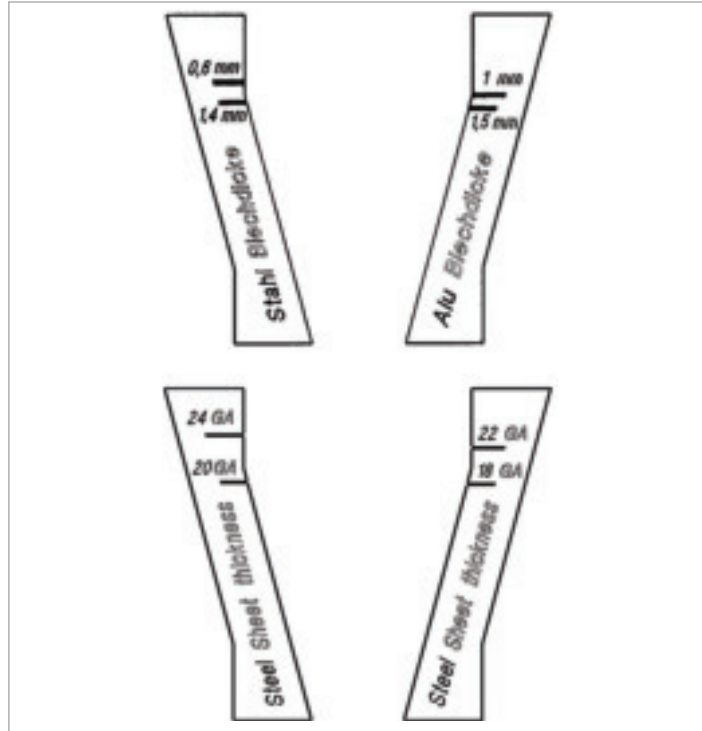
Fig. 10173

By default, the tool works with the largest angle. For this, the roller holder is slid to the end in the slot on the corresponding side and is fixed.

For thin sheets (0.6 - 0.9 mm) the tilt can be finely adjusted by approx. 3°. This reduces the angle at which the driving roller applies pressure and improves the appearance and quality of the Pittsburgh connection (less outward bulge on the Pittsburgh lock seam).

4.4 Setting the tool's initial tension

The scales show the initial tension settings for various material thicknesses and types. This is set using the adjusting screw (2) ([see "Fig_setting_the_drawing_inclination_F 140\(1A1\)"](#)).



Europe top, USA bottom

Fig. 10174

1. Apply the machine to the prepared workpiece.
2. Put the tool in its working position by swinging the clamping lever (1) into its upper position (against the stop). The clamping lever must gently engage.
3. The initial tension can be corrected using the adjusting screw (2) if the clamping lever is released.

5. Operation

⚠ CAUTION

Damage to property due to excessively high line voltage

Motor damage

- Check the line voltage. The power supply voltage must correspond to the information on the nameplate of the machine.
- When using an extension cord that is longer than 5 m, the cord must have a line diameter of at least 2.5 mm².

⚠ WARNING

Damage to the machine due to improper handling.

- Make sure the machine is always in a stable position when operating it.
- Never touch the tool while the machine is running.
- Always operate the machine away from your body.
- Do not operate the machine above your head.

5.1 Working with TruTool F 140 (2A1)

Switching on

- Slide the On/Off switch forwards.

Process

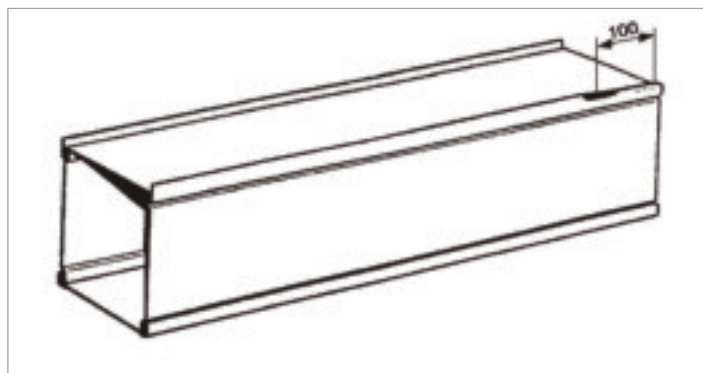


Fig. 10167

1. Close the flange at the start of the channel for a length of 100 mm.
2. Apply the machine to the prepared workpiece.

3. Put the tool in its working position by swinging the clamping lever (1) into its upper position (against the stop). The clamping lever (1) must gently engage.
4. Switch on the machine and close the flange.

Note

For low sheet thicknesses (0.6 - 1 mm) the rim can be pre-shaped to 30° without a form piece over a length of about 80 mm.

5. Switch the machine off and remove the tool from the channel.

Influencing factors	Effect	Correction
If the material is stronger	The seam leaks	▪ Increase the initial tension on the rollers. ▪ Increase the tilt.
The flange is lower	The feed force increases → The machine stops	▪ The specified dimensions for the preparation of the seam must be maintained. ▪ Increase the initial tension on the tool. ▪ Choose a different roller.
The flange is wavy	The sheet is getting behind the roller	The flange may not be at more than 90° to the surface of the channel.
The driving rollers slip	The machine stops	Increase the initial tension

Tab. 7

Switching off

- Slide the On/Off switch to the rear.

5.2 Overload protective device on the motor

Note

1. Allow the machine to run in idle until it has cooled down.
2. Operate the machine normally after it has cooled down.

6. Maintenance

WARNING

Risk of injury due to incorrect repair work

Machine does not work properly.

- Maintenance may be carried out by trained specialist technicians only.
- Only use original TRUMPF accessories.

Maintenance point	Procedure and interval	Recommended lubricants	Lubricant Order No.
Gearbox and gear head	After 300 operating hours, arrange for a technician to add grease or to replace the lubricating grease	Lubricating grease "G1"	0139440
Ventilation slots	Clean as needed	-	-

Maintenance positions and maintenance intervals

Tab. 8

6.1 Replacing carbon brushes

The motor comes to a standstill whenever the carbon brushes are worn out.

Note

For TRUMPF service addresses, see www.trumpf-power-tools.com.

- Change the carbon brushes.

6.2 Changing the power cable

If the power cable is to be replaced, it should be procured from the manufacturer or an authorized dealer to avoid safety hazards.

Note

For TRUMPF service addresses, see www.trumpf-power-tools.com.

7. Accessories and consumables

Consumables	Quantity	Order number	Scope of delivery
Driving roller	2 pieces	0003523	X
Rim roll	2 pieces	0023181	X
Roller 0.6 - 1.0 mm	1 piece	0110327	X
Roller 1.0 - 1.4 mm	1 piece	0110331	-
Spacer	1 piece	0020214	X

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Accessories	Quantity	Order number	Scope of delivery
TRUMPF Box S2	1 piece	1763682	X
Cover, TRUMPF Box lining	1 piece	1889485	X
Seal cap D15 d4,25 L10	4 piece	1890095	X
TRUMPF Box S201 lining	1 piece	1771099	X
Safety information EW	1 piece	0125699	X
Operator's manual, Tru-Tool F 140 (2A1)	1 piece	1942458	X
Extractor, complete	1 piece	0247536	X
Screwdriver DIN 911 AF 5, 28x80	1 piece	0067857	X
Screwdriver DIN 911 AF 2.5	1 piece	0067822	X

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Tab. 10

7.1 Ordering consumables

Note

The following data must be specified in order to ensure that parts are delivered correctly and without delay.

1. Specify the order number.
2. Enter further order data:
 - Voltage data
 - Quantity
 - Machine type
3. Specify the complete shipping information:
 - Correct address.
 - Desired delivery type (e.g. air mail, courier, express mail, ordinary freight, parcel post).

Note

For TRUMPF service addresses, see
www.trumpf-powertools.com.

4. Send the order to the TRUMPF representative office.

**8. Appendix: Declaration of conformity,
guarantee, replacement parts lists**

