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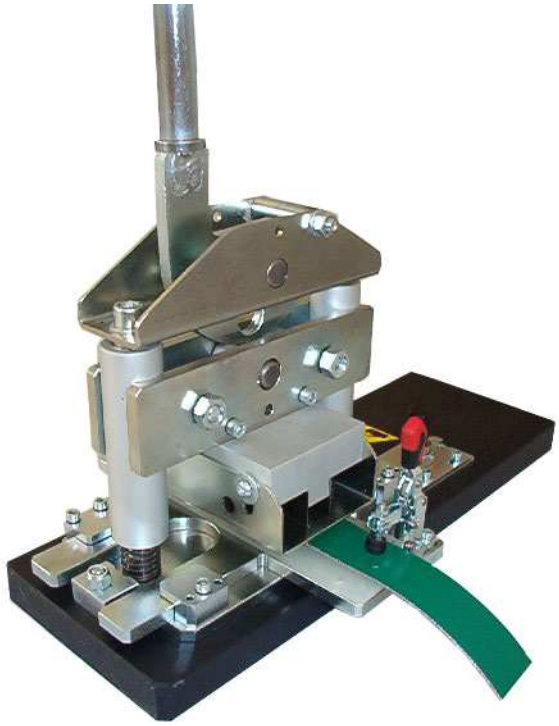
Flexproof-Cutter AF-42/0



The AF-42/0 is a preparing device (die-cutting tool) for 10x120 mm Flexproof finger geometry. It is designed mainly for Habasit polyester transmission belts up to 3.5 mm thickness.

The AF-42/0 has a cutting head with two blades. The cutting pad can be positioned by a pin in steps of 10 mm, ensuring the required accurancy. The fingers are thus cut manually step by step by means of a lever.

The AF-42/0 is designed and suitable for occasional on-site preparations of Habasit tapes and belts.

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Appendix:

- ❑ Preventive maintenance, checklist and record sheets

1. General information

1.1 Application

The Flexproof-Preparing device AF-42/0 was specifically designed for the rapid and safe preparation (die-cutting) of Habasit belts and tapes using the Flexproof procedure. The belts/tapes can be up to 40 mm/*1.57 in.* width and 3.5 mm/*0.13 in.* thickness.

Workable products: series TC up to TC-55, series TF up to TF-33, series CM up to CM-14/30.

It is suitable for Habasit standard finger geometries with the pitches of 10 x 120 mm. Die-cutting is done in manual strokes, resulting in the most precise finger cut and therefore optimum joint strength.

The Flexproof-Preparing device AF-42/0 was developed solely for the purposes described in the operating instructions. Improper use, or use for other applications than those described in the instructions, is not permissible. Habasit accepts no liability for the consequences of improper application.

The AF-42/0 is manufactured according to the state-of-the-art and fulfills the EC safety regulations.

These operating instructions imply that all assembly, maintenance, and repair work, as well as operation of the die-cutting device, be carried out by skilled personnel or monitored by responsible specialists.

For reasons of scope, these instructions cannot cover all possible aspects of operation, maintenance, or repair. The indications given herein refer to the use of the tools according to their designated purpose by skilled personnel.

In the event of doubt or in need of further information, always contact the manufacturer (see chapter 1.4).

1.2 Relevant safety terms

In these operating instructions, you will find the terms WARNING, CAUTION, and INDICATION. They signal dangers or special information to be borne in mind.

WARNING	If disregarded, there is a danger of severe injury, and/or severe material damage.
CAUTION	If disregarded, there is a danger of injury, and/or material damage may be caused.
INDICATION	Technical information is emphasized if it is important and not readily apparent, even for skilled personnel.

Please observe all indications for assembling, operating, and maintaining this device, as well as all technical data! This will prevent possible trouble and/or damage to people or materials.

Skilled personnel refers to persons authorized to perform the required work. These people have been sufficiently trained and introduced to their field of activity so that they are able to recognize and prevent dangers. They are aware of the pertinent provisions and safety regulations.

1.3 Extent of supply

Qty.	Item
1	AF-42/0 Flexproof-Preparing device
1	Operating instructions

1.4 Ordering of accessories/spare parts

Spare parts and accessories can be ordered directly from the manufacturer.

Address:

Habasit Italiana S.p.A.
Via del Lavoro, 50
I-31016 Cordignano / TV
Tel. ++39 438 91 13
Fax ++39 438 91 2374

Please specify the ordered parts clearly, referring to the part numbers and if necessary to the illustrations in this manual.

WARNING	The use of foreign parts not meeting Habasit specifications is not admissible. Habasit declines all responsibility for the consequences if non-Habasit parts are used.

1.5 Warranty

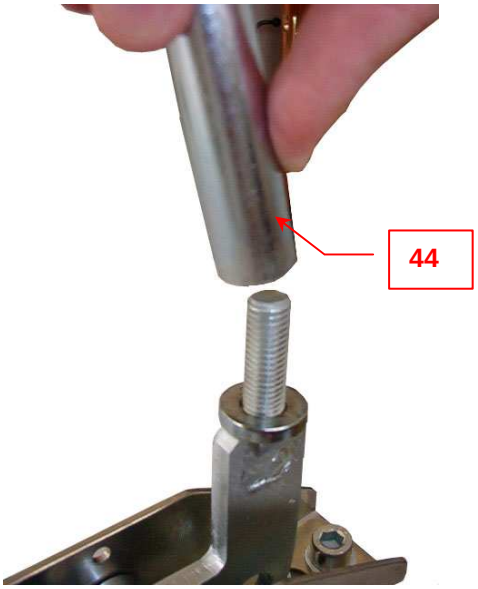
This machine passed a strict final inspection. On the assumption of correct handling they are warranted against material defects for 1 year.

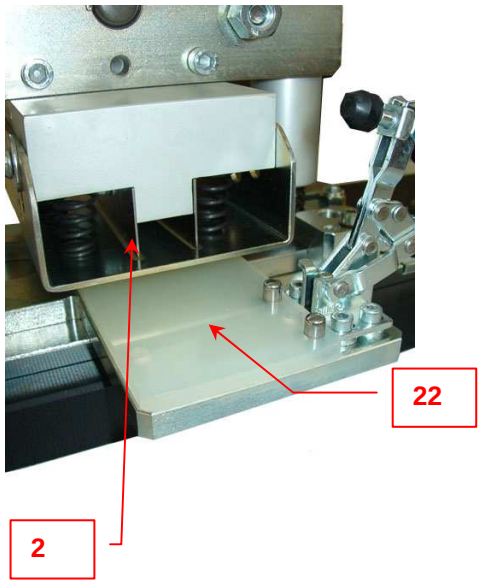
1.6 Technical advice

Our specialists will be pleased to advise you. For any questions, please contact the manufacturer (Section 1.4).

2. Installation

- ❑ For safe operation, place the Flexproof-Preparing device AF-42/0 on a solid workbench or table. If it is used only stationary it is recommended to fix the stand.
- ❑ Screw the lever (44) to the machine.
- ❑ Check to make sure that the surface of the cutting pad (22) where the belts/tapes are to be cut is clean.
- ❑ Check sharpness of the cutting blades (2).





3. Flex cutting process

Process: Flexproof guideline and technical data sheets of habasit products.

3.1 Flex cutting of the belt/tape

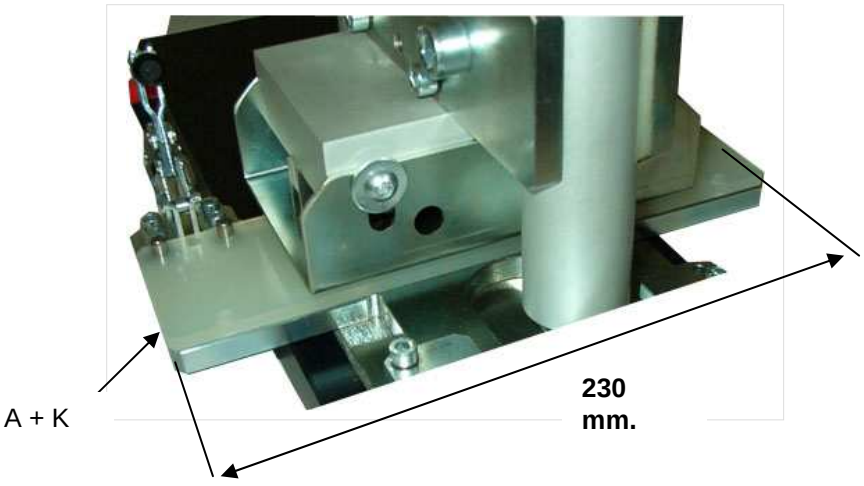
- ❑ Unlock the two clamping pin (24) by the dedicated lever.
- ❑ Insert tape and align properly its edge to the four side pins . Watch for good alignment. Otherwise the fingers of the cut belt/tape ends might not match properly.
- ❑ Lock the belt/tape in position by clamping pin (24).
- ❑ Pull the indexing plunger (18) and move the cutting head slider (15) to the alignment pins direction. Release the indexing plunger (18) in the way that the pin enter the first hole.
- ❑ Carry out first cutting stroke by pulling down lever (44).

- ❑ Pull the indexing plunger (18) and move the cutting head slider (15) of one step to the nearest hole. Release the indexing plunger (18) in the way that the pin enter the hole.
- ❑ Carry out the successive cutting stroke by pulling down lever (44).
- ❑ Repeat the operations until the belt is completely cut.

INDICATION	Do not turn the belt/tape for the second Flexproof cutting operation. Otherwise the cut fingers of both ends will not match! Check that the upper belt/tape side is always the same

3.2 The first operation starting from a new belt/tape coil

- ❑ Measure 230 mm / *9.05 in*. from the belt/tape end. Draw a line in a right angle across the belt/tape (see illustration 1). This is point A. The 230 mm / *9.05 in*. long belt/tape piece serves for safe fixing under the clamps (12). It is only needed once at the beginning of every new coil, if there is not yet an already cut finger splice.
- ❑ Measure the required belt/tape length x from the mark A and draw a second line in a right angle to the belt/tape. This is point B.
- ❑ Insert belt/tape in the Flexproof-Preparing device and align mark A on the edge K of the cutting pad.
- ❑ Carry out the cutting operation (see 3.1).



3.3 Continuing Flexproof cutting

- ❑ The belt/tape end has already fingers cut in correct shape.
- ❑ From last cutting operation, the mark B is visible. This mark is used as a reference for the following measuring and cutting procedure according to 3.2 (see illustration 2).

3.4 Serial Flexproof cutting process

- ❑ If series of belts/tapes are to be cut, the lengths can be marked prior to cutting operation as shown on illustration 2.
- ❑ Insert belt/tape in Flexproof-Preparing device and align mark B on the edge K of the cutting pad.
- ❑ Carry out the cutting operation (see 3.1) and repeat this operation for every following mark B1, B2.....

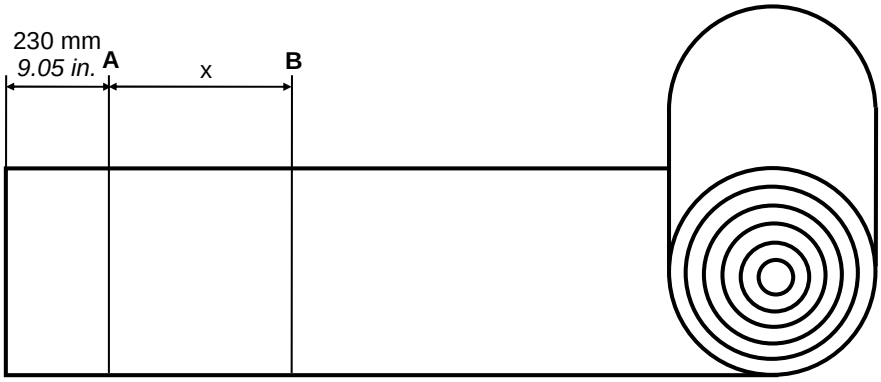


Illustration 1: Cutting start from a new coil

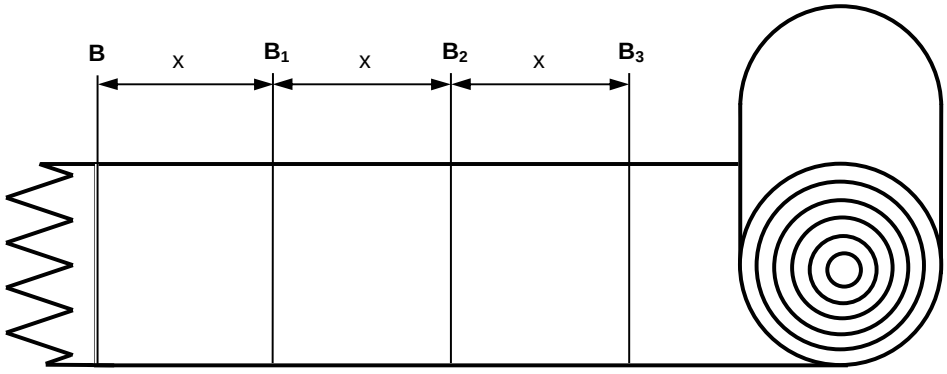


Illustration 2: Continuing and serial cutting

4. Service

Please make reference to parts drawings (tav.1, tav.2 and tav.3) at the end of this manual to identify part number.

4.1 Preventive Maintenance

- ❑ Keep the cutting pad (22) clean at all times. Clean it regularly and remove material residues.
- ❑ Check the cutting blades (2) periodically for their sharpness and replace with the correct type if necessary.
- ❑ Slightly lubricate the hinge of the preparing device with oil at periodic intervals.
- ❑ See also checklist and record sheet enclosed

4.2 Replacement of cutting blades (ref. Tav.1,Tav.2 and Tav.3)

- ❑ Unscrew the 4 screws (51- tav.1) which fix the cutting head to the cutting carriage.
- ❑ Unscrew the 4 screws (Tav.3 – 12) which fix the blank holder (4) to the blades support (1) and remove it.
- ❑ Remove the blank holder (4) to access the blades (2)
- ❑ Remove the blades (2).
- ❑ Replace the cutting blades making the same operations in reverse order.

WARNING	When you change the cutting blades you should be very carefully to avoid cut injures through the blades.

4.3 Replacement of the cutting pad

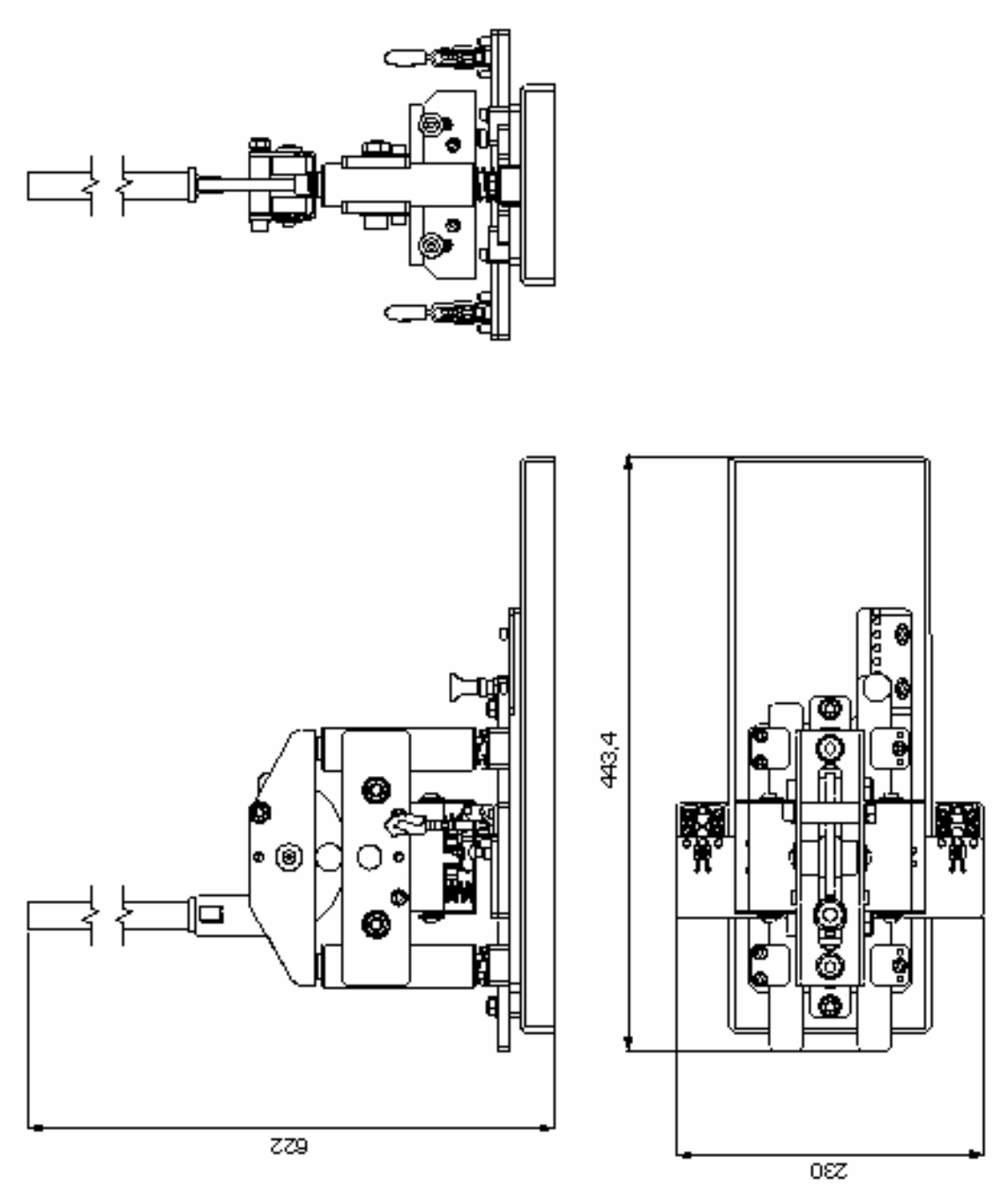
- ❑ Remove the 4 pins(Tav.1 - 20).
- ❑ Remove the cutting pad (22).
- ❑ Replace the cutting pad making the same operations in reverse order.

5. Technical data

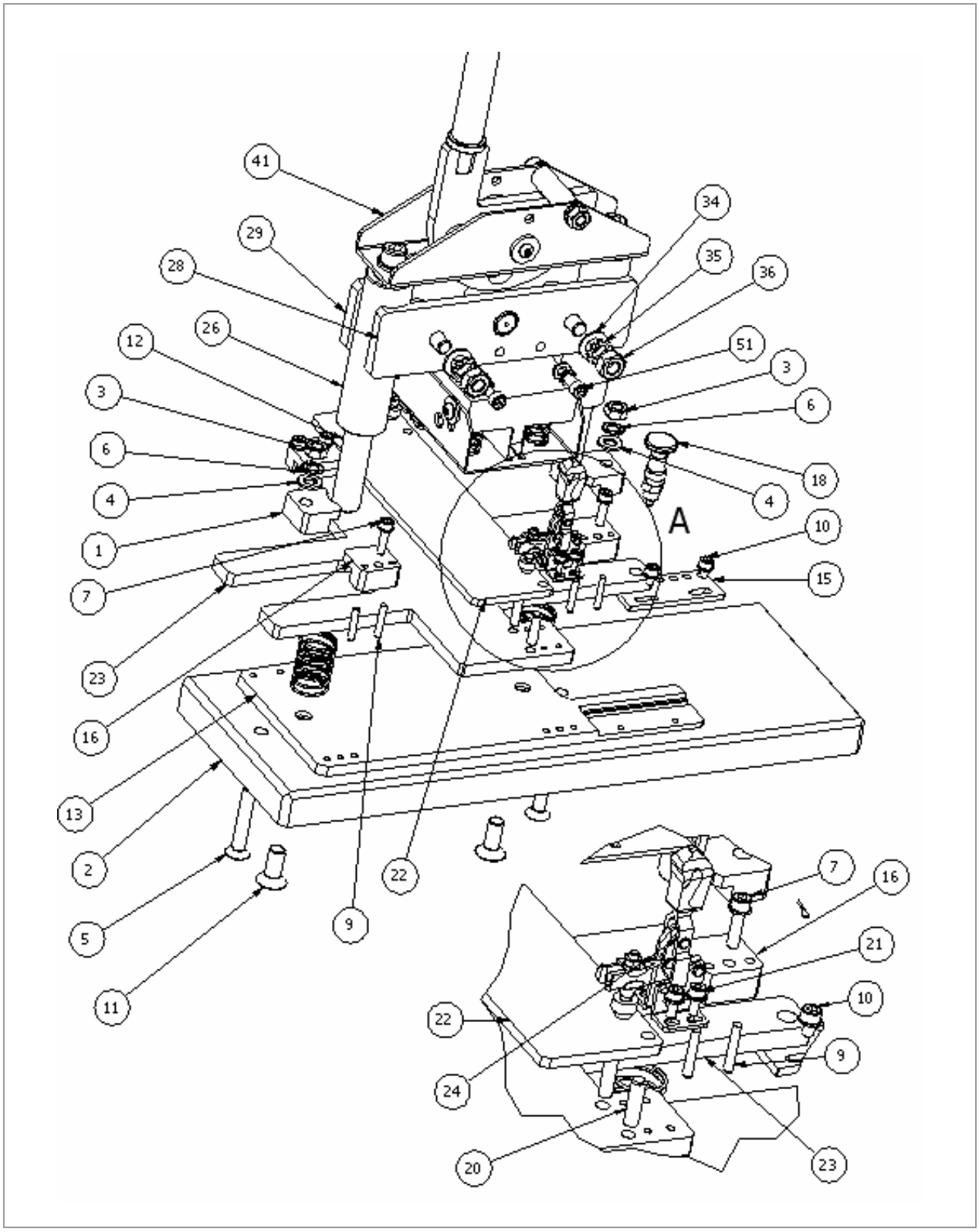
Max. belt/tape width [mm] *[in.]*	40	*1.57*
Max. belt/tape thickness [mm] *[in.]*	3.5	*0.13*
Dimensions without lever (L x W x H) [mm] *[in.]*	445 x 230 x 260	*10.2 x 9 x 10.2*
Net weight [kg] *[lbs.]*	8.3	*18.29*

6. Drawings

Dimensions



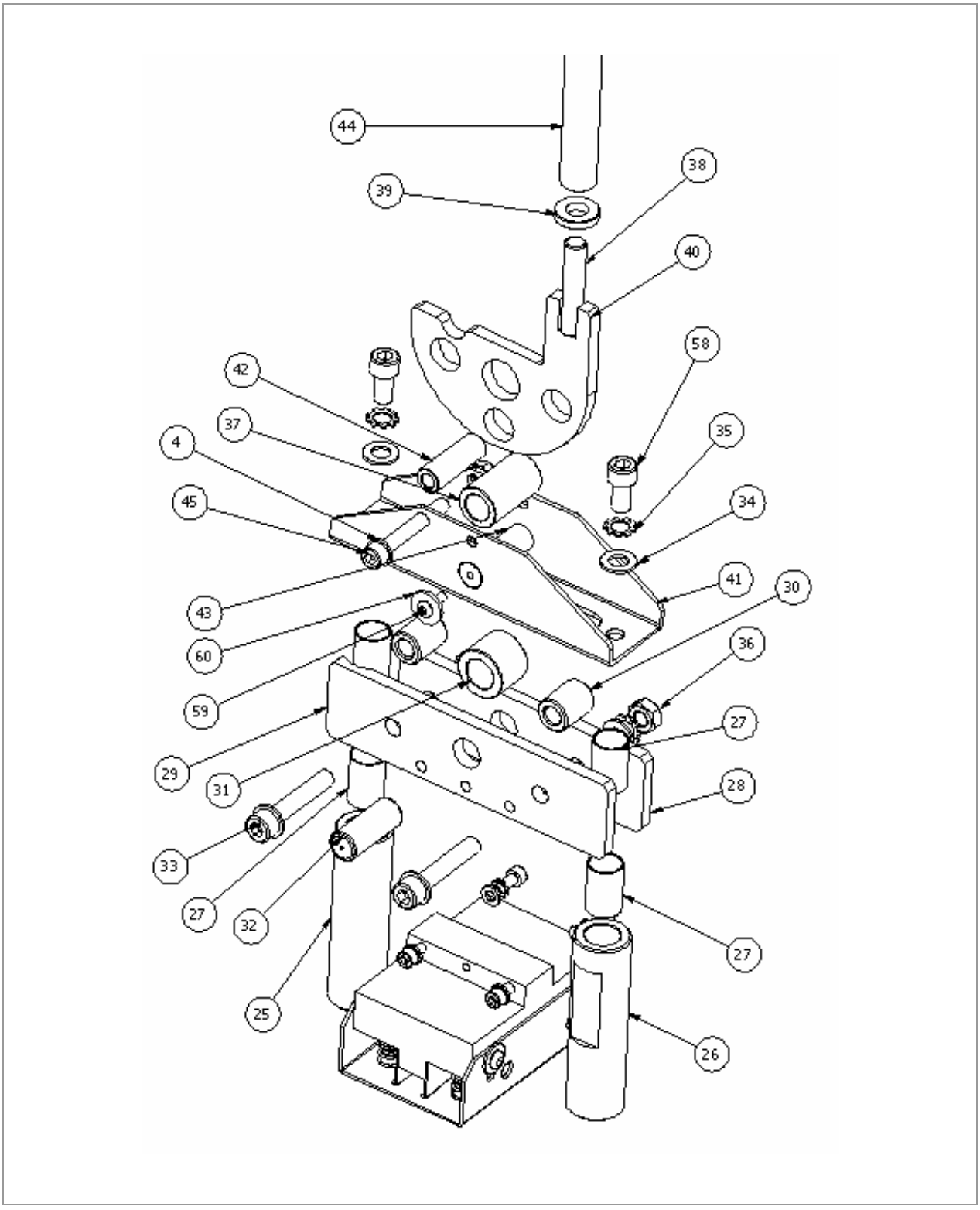
Tav.1 AF-42/0 Flexproof cutter – H08D005635



Flexproof cutter AF-42/0 ID005635 – Main view

POS.	QTY.	CODE	DESCRIPTION
1	2	ID005627	LOCKING PLATE
2	1	ID005626	BASE PLATE
3	3	IN010216	BOLT UNI 5588-68 M8 ZINC.
4	4	XN000105	WASHER DIN 125 - A 8,4
5	2	XN000206	ALLEN-KEY SCREW DIN 7991 - M8X50
6	3	XN000199	WASHER DIN 6797 - A 8,4
7	6	IN010594	ALLEN-KEY SCREW UNI 5931-M5X20 ZINC.
9	4	XN000134	PIN ISO 2338 - 4 M6 X 24 - A
10	6	XN000204	ALLEN-KEY SCREW - M5X8 ZN
11	2	IN011746	COUNTERSUNK ALLEN-KEY SCREW UNI 5933 - M10X25 ZINC.
12	2	ID005601	GUIDING SHAFT (CASE HARDENED)
13	1	ID005602	PLATE
15	1	ID005603	CUTTING STEPS PLATE
16	2	ID005605	CARRIAGE GUIDING BLOCK
18	1	XN000207	SPRING PIN HOLDER ELESA GN617.1-5-AK
20	4	IN010318	PIN ISO 8734 - 6 X 24 - A
21	8	IN010520	ALLEN-KEY SCREW - DIN 912 - M4 X 10 ZN
22	1	ID005607	CUTTING PAD
23	1	ID005606	MOBILE PLATE
24	2	XN000208	LOCKING UNIT AMF ART.376500-0
26	1	ID005621	COLUMN
28	1	ID005616	LEFT PLATE
29	1	ID005617	RIGHT PLATE
34	6	IN010695	WASHER DIAM 10MM ZINC.
35	4	XN000198	WASHER DIN 6797 - A 10,5
36	2	IN010271	BOLT DIN 934 - M10
41	1	ID005611	TOP FRAME WITH CAM HOLDER

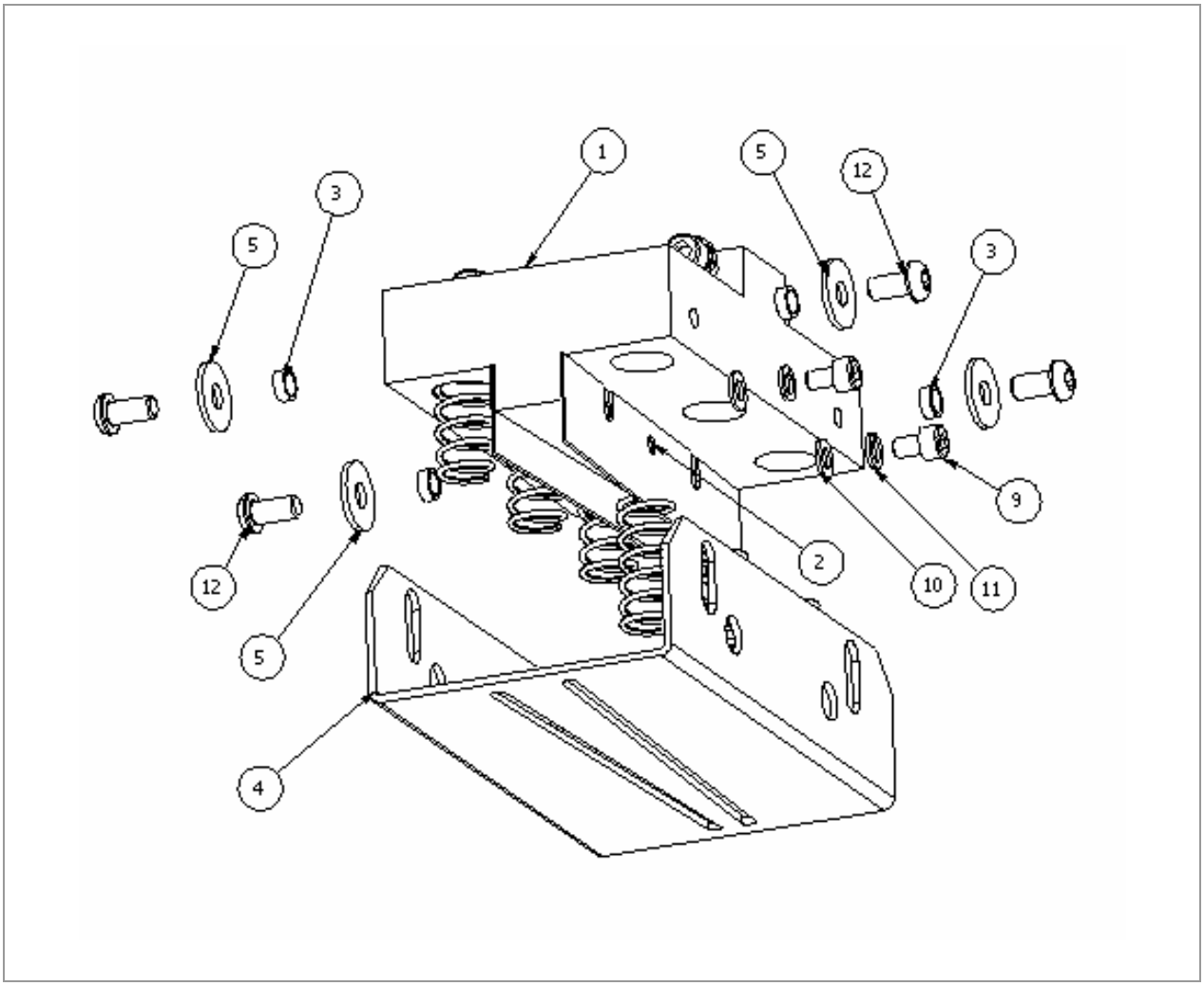
Tav.2 H08D005635 – Head of cutter with leverage



Flexproof cutter AF-42/0 **Head of cutter with leverage – H08D005635**

POS.	QTY.	CODE	DESCRIPTION
4	4	XN000105	WASHER DIN 125 - A 8,4
25	1	ID005620	CENTRED SLEEVE CARRIAGE
26	1	ID005621	FREE SLEEVE CARRIAGE
27	4	XN000210	INA BRONZE BUSHING 20X18X24
28	1	ID005616	LEFT HEAD MOVEMENT PLATE
29	1	ID005617	RIGHT HEAD MOVEMENT PLATE
30	2	ID005618	ECCENTRIC ROD SPACER
31	1	ID005619	TEMPERED SLIDING BEARING
32	1	XN000209	TEMPERED CYLINDER PIN D.18 X 45
33	2	XN000200	ALLEN-KEY SCREW DIN 912 - M10 X 55
34	6	IN010695	D. 10 GALVANIZED WASHER
35	4	XN000198	TOOTHED LOCK WASHER DIN 6797 – A 10,5
36	2	IN010271	ALLEN-KEY NUT DIN 934 – M10
37	1	ID005613	WELD CENTRING BEARING
38	1	ID005614	THREADED ROD M12X60
39	1	ID005615	LEVER REINFORCEMENT WELD WASHER
40	1	ID005612	HEAD DRIVE ECCENTRIC
41	1	ID005611	ECCENTRIC LOCK PROFILE
42	1	ID005610	LEVER ROTATION LOCK SPACER
43	1	ID005609	LEVER ROTATION PIN
44	1	ID005608	HEAD DRIVE LEVER
45	1	IN010057	UNI 5931-M8X60 GALVANIZED ALLEN-KEY SCREW
58	2	IN010123	ALLEN-KEY SCREW UNI 5931-M10X20
59	2	XN000073	BROACH SCREW WITH BUTTON AND RECESSED ALLEN-KEY HEAD – METRIC - ANSI B18.3.4M - M5 X 0.8 X 16
60	2	XN000201	WIDE WASHER 5X20

Tav.3 H08D005634 - AF-42/0 flexproof cutting head



Punch cutter AF-42/0			**flexproof cutting head – H08D005634**
POS.	**QTY.**	**CODE**	**DESCRIPTION**
1	1	ID005622	CUTTING HEAD BODY
2	2	ID005624	CUTTING BLADE 120MM
3	4	ID005625	PRESSURE PLATEN SCREW SPACER
4	1	ID005623	CUTTING HEAD PRESSURE PLATEN
5	4	XN000202	WIDE WASHER 6.4
9	4	XN000204	RECESSED ALLEN-KEY CYLINDER HEAD SCREW M5X8 ZN
10	4	IN010061	WASHER DIN 125 - A 5,3
11	4	XN000205	ELASTIC GROWER WASHER – M5
12	4	IN011609	CONVEX HEAD SCREW – METRIC ANSI B18.3.4M - M6 X 1 X 12
13	6	XN000212	HEAD PRESSURE PLATEN SPRING DI. 12X32 COIL 1.5MM

Responsible persons: **A: Machine Operator**
B: Maintenance Technician

Work to be carried out (see operating instructions for further information and reference numbers)		**Performance periodically (monthly)**				**Spares number Evaluation criterion**
		Daily	**1**	**6**	**Remarks**	
1.	**Cleaning**					
1.1	Clean the Flexproof-Cutter after use, remove residual matter	A				
2.	**Inspection of the cutting pad**					
2.1	Check the condition of the cutting pad. If excessive wear and/or insufficient cutting quality is found, the cutting pad has to be replaced.		B			
3.	**Checking of die-cuts**					
3.1	Check quality of cuts and inspect cutting blades for damages. If necessary replace. See operating instructions, Section 4.2		B			

Remarks and notes:

Machine type:

Machine no.: **Date of first placing in operation:**

Actions to be performed – see checklist (daily work not recorded)	Next Check	Performed Initials	Performed Date	Next Check	Performed Initials	Performed Date	Next Check	Performed Initials	Performed Date	Next Check	Performed Initials	Performed Date
2.1 Inspect condition of cutting pad. If excessive wear and/or insufficient cutting quality is found, the cutting pad has to be replaced.												
3.1 Check quality of cut and inspect cutting blade for damages. If necessary replace.												

Observations, repairs:

Product liability, application considerations

If the proper selection and application of Habasit products are not recommended by an authorized Habasit sales specialist, the selection and application of Habasit products, including the related area of product safety, are the responsibility of the customer.
All indications / information are recommendations and believed to be reliable, but no representations, guarantees, or warranties of any kind are made as to their accuracy or suitability for particular applications. The data provided herein are based on laboratory work with small-scale test equipment, running at standard conditions, and do not necessarily match product performance in industrial use. New knowledge and experiences can lead to modifications and changes within a short time without prior notice.

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