

TOX®-Marking Tools



Data
sheet
75.20

2015/10

Marking Tools Manual Type: PP



Manually adjustable numbering head

- safe, quick setting for frequent number changes
- available in many character sizes
- available with numbers, letters and logos
- replaceable individual wheels
- characters per DIN 1451 standards
- special types, character size, etc. available on request

Items included with delivery:

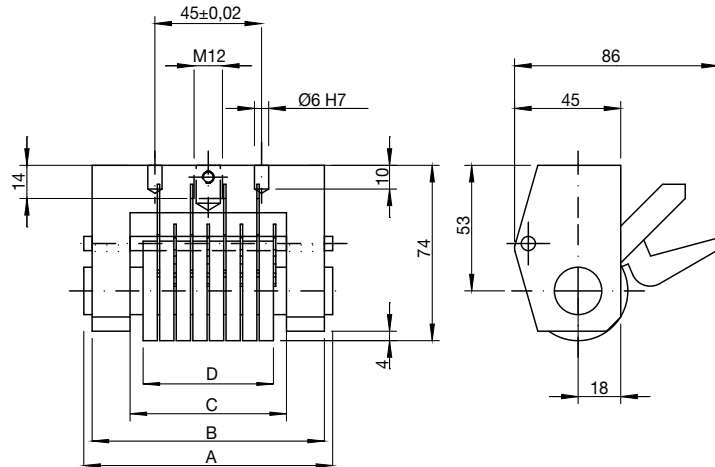
- marking head
- mounting shank (optional)

Custom marking tools / characters available upon request.

Ordering example:

PP 01.04.04. (wheel 1 – 4 “0 – 9”

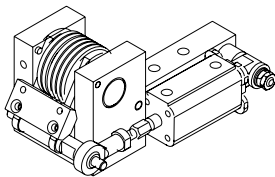
- Configuration of characters on wheels, e.g. wheel 1 – 4 with characters 0 – 9
- Character height (mm)
- Number of characters
- 01 Medium type (02 condensed)
- Marking head



Number of characters (Number of wheels)	Medium standard type 01								Medium condensed type 02								Condensed type 03								Character height						
	14 positions per wheel								11 p.p.w.								14 positions per wheel									11 p.p.w.					
2	4	5	6	7	9	11	13	17	2	2.5	3	4	5	6	8	2	2.5	3	4	5	6	8	2	2.5	3	4	5	6	8		
3	6.5	8	9.5	11	14	17	20	26	6.5	8	9.5	11	14	17	20	6.5	6.5	8	9.5	11	14	17	6.5	6.5	8	9.5	11	14	17		
4	9	11	13	15	19	23	27	35	9	11	13	15	19	23	27	9	9	11	13	15	19	23	9	9	11	13	15	19	23	Marking width D	
5	11.5	14	16.5	19	24	29	34	44	11.5	14	16.5	19	24	29	34	11.5	11.5	14	16.5	19	24	29	11.5	11.5	14	16.5	19	24	29		
6	14	17	20	23	29	35	41	53	14	17	20	23	29	35	41	14	14	17	20	23	29	35	14	14	17	20	23	29	35		
7	16.5	20	23.5	27	34	41	48	62	16.5	20	23.5	27	34	41	48	16.5	16.5	20	23.5	27	34	41	16.5	16.5	20	23.5	27	34	41		
8	19	23	27	31	39	47	55	19	23	27	31	39	47	55	19	19	23	27	31	39	47	19	19	23	27	31	39	47			
9	21.5	26	30.5	35	44	53	62	21.5	26	30.5	35	44	53	62	21.5	21.5	26	30.5	35	44	53	21.5	21.5	26	30.5	35	44	53			
10	24	29	34	39	49	59	24	29	34	39	49	59	24	24	29	34	39	49	59	24	24	29	34	39	49	59					

All dimensions in mm.

Automatically advancing marking head



Ordering example:

PP 01.05.05.A3

- A3: last 3 digits
- automatic advance
- Character height 5 mm
- Number of characters 5
- 01 medium type (02 medium condensed)
- Marking head

Sequencing example:

- 1st wheel: fixed, without advance
- 2nd wheel: adjustable, e.g. for character change A, B, C
- 3rd – 5th wheels: automatic advance
- 1 – 999

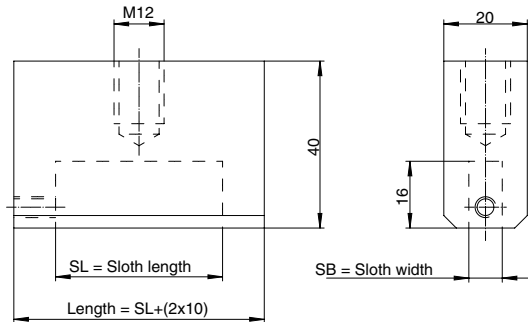
Dimensions on request.

Pneumatically controlled advancing device is also available.

Automatically advancing numbering coining head

- a mechanical, pneumatic or electric mechanism with a minimum of 25 mm travel will automatically advance one count on each stroke
- available with up to max. 6 place automatic advance, up to max. 8 mm character height, marking wheels max. 10 places
- characters: numbers, letters, special symbols

Stamps holder type TH

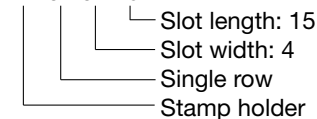


All dimensions in mm
Special on request.

Items included with delivery
- Stamp holder without stamps
- Mounting shank (optional)

Ordering example:

TH 01.04.15



Can be used with all TOX®-Drives including FinePress.

TH (single row)

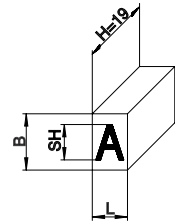
	SB	SL
TH01	4	15
TH01	4	30
TH01	6	20
TH01	6	40
TH01	8	20
TH01	8	40

Stamps type PT

Stamps available individually or in sets

Sizes available

SH = Character height	L = Length	B = Width	Characters available
1.0	1.5	4.0	A-Z
1.5	1.5	4.0	0-9
2.0	2.0	4.0	. (Period)
2.5	2.5	6.0	, (Comma)
3.0	3.0	6.0	- (Hyphen)
4.0	4.0	8.0	/ (Slash)
5.0	5.0	8.0	



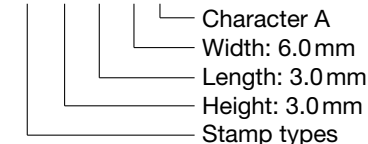
All dimensions in mm
Other sizes feasible

Please observe the corresponding stamp holder for the selected number of characters or stamps.

Characters according to DIN 1451 standards – medium type – beveled – nickel plated.

Ordering example:

PT 30.30.60.A



Technical Information

Material characteristics for marking

Tensile strength R_m (N/mm²) for various materials

Material designation	R _m N/mm ²	Material designation	R _m N/mm ²
Steel		Non-ferrous metals	
DC01 (St1203)	≤ 400	EN AW-5754 (AlMg3)	≤ 290
DC04 (St1403)	≤ 400	EN AW-5182 (AlMg5)	≤ 380
DD11 (StW22)	≤ 440	EN AW-2007 (AlCuMgPb)	≤ 470
S235JR-C (St37-K)	≤ 510	CC482K (CuSn11Pb2-C)	≤ 360
S355J2G3 (St52-3)	≤ 630	CW614N (CuZn39Pb3)	≤ 540
E335 (St60-2)	≤ 710	CW004A (E-Cu57)	≤ 390
X5CrNi18-10 (1.4301)	≤ 700	Pb99.94Cu	≤ 20

Letter height in mm	Factor A, to be applied mm ²
1	3.4
1.5	5
2	7
3	10
4	14
5	17
6	20
7	23
8	27
10	32
12	40

Base for the calculation of the required marking force for numbering tools

Formula: $F_p = A \times R_m \times ST$

F_p = marking force

A = factor, see table, mm²

R_m = tensile strength, N/mm²

ST = number of digits

When selecting the appropriate drive unit, allow about 30 % reserve force to account for wear of the tools and tolerances in material strengths.

Example:

A marking tool with 6 digits, 5 mm letter height, for a material with tensile strength $R_m = 400$ N/mm², requires the following stamping force:

$$F_p = 17 \text{ mm}^2 \times 400 \text{ N/mm}^2 \times 6 = 40.800 \text{ N}$$

Recommended stamping force to be expected: 40.800 N + 30 % reserve = 53.040 N