

12.3 Calculation of the print speed

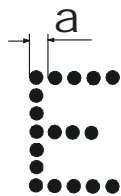
Calculation of the maximum possible **print speed** V_p depending on character width, font form, number of lines, 64 and 96 kHz drop frequency and various draft modes. The various draft modes are to be understood as meaning the use of various drop loading sequences which has a qualitative influence on printe quality. The best print quality is achieved with the draft mode 0 (with the lowest character height), on the other hand the maximum print speed based on the font width is lower based.

The draft mode 2 enables the highest print speed (up to 9 dot character height), however it does not have the optimum drop distribution. The character height must be set up to 100. The draft mode 1 constitutes a compromise for faster print speed (up to 16 dot, character height variably)

The Draftmode 3 is for fast barcode printing up to 24 dot. The character height is variably.

The Draftmode 4 (up to 24 dot) is for extremely small fonts. Character height variably.

Figure 118



a = stroke gap in mm on the character <E> in the 7x5 matrix

The **achievable character height** is of no significance for the calculation but rather must only be observed in the choice of font and for good legibility in accordance with the requirements.

The maximum and in particular the minimum character height depend to a very great extent on the ink used, the material and the surface.

96 KHz							
Matrix	Draft	Number of lines	CPI	Stroke distance	V max in m/min	V max in m/s	Factor T=a/V
11x8	0	1	7	0,4097	68,036	1,134	0,361
11x8	0	1/16 Dot	7	0,4097	47,186	0,786	0,521
11x8	0	2/24 Dot	7	0,4097	28,531	0,476	0,862
11x8	1	1	7	0,4097	93,275	1,555	0,264
11x8	3	1	7	0,4097	93,275	1,555	0,264
11x8	3	2/24 Dot	7	0,4097	40,602	0,677	0,605
11x8	4	1	7	0,4097	68,036	1,134	0,361
11x8	4	2/24 Dot	7	0,4097	28,531	0,476	0,862
12x8	0	1	7	0,4097	52,673	0,878	0,467
12x8	0	1/16 Dot	7	0,4097	40,602	0,677	0,605
12x8	0	2/24 Dot	7	0,4097	24,142	0,402	1,018
12x8	1	1	7	0,4097	68,036	1,134	0,361
12x8	3	1	7	0,4097	68,036	1,134	0,361
12x8	3	2/24 Dot	7	0,4097	35,115	0,585	0,700
12x8	4	1	7	0,4097	52,673	0,878	0,467
12x8	4	2/24 Dot	7	0,4097	25,239	0,421	0,974
14x10	0	1	6	0,3908	41,700	0,695	0,562
14x10	0	1/16 Dot	6	0,3908	39,505	0,658	0,594
14x10	1	1	6	0,3908	54,868	0,914	0,427
14x10	3	1	6	0,3908	54,868	0,914	0,427
14x10	4	1	6	0,3908	41,700	0,695	0,562
16x10	0	1	6	0,3908	38,408	0,640	0,611
16x10	0	1/16 Dot	6	0,3908	38,408	0,640	0,611
16x10	1	1	6	0,3908	52,673	0,878	0,445
16x10	3	1	6	0,3908	52,673	0,878	0,445
16x10	4	1	6	0,3908	38,408	0,640	0,611
24x24	0	1	3	0,3432	24,142	0,402	0,853
24x24	3	1	3	0,3432	37,310	0,622	0,552
24x24	4	1	3	0,3432	24,142	0,402	0,853
BC 16	0	2 aus 5		0,3432	39,505	0,658	0,521
BC 16	1	2 aus 5		0,3432	54,868	0,914	0,375
BC 16	3	2 aus 5		0,3432	54,868	0,914	0,375
BC 24	0	2 aus 5		0,3432	26,337	0,439	0,782
BC 24	4	2 aus 5		0,3432	26,337	0,439	0,782
BC 24	3	2 aus 5		0,3432	40,602	0,677	0,507
G 16	0	1		0,3432	27,434	0,457	0,751
G 16	1	1		0,3432	41,700	0,695	0,494
G 16	3	1		0,3432	39,505	0,658	0,521
G 16	4	1		0,3432	27,434	0,457	0,751
G 24	0	1		0,3432	27,434	0,457	0,751
G 24	3	1		0,3432	39,505	0,658	0,521
G 24	4	1		0,3432	27,434	0,457	0,751

64 KHz							
Matrix	Draft	Number of lines	CPI	Stroke distance	V max in m/min	V max in m/s	Factor T=a/V
11x8	0	1	7	0,4097	61,452	1,024	0,400
11x8	0	1/16 Dot	7	0,4097	46,089	0,768	0,533
11x8	0	2/24 Dot	7	0,4097	27,434	0,457	0,896
11x8	1	1	7	0,4097	61,452	1,024	0,400
11x8	3	1	7	0,4097	61,452	1,024	0,400
11x8	3	2/24 Dot	7	0,4097	27,434	0,457	0,896
11x8	4	1	7	0,4097	61,452	1,024	0,400
11x8	4	2/24 Dot	7	0,4097	27,434	0,457	0,896
12x8	0	1	7	0,4097	46,089	0,768	0,533
12x8	0	1/16 Dot	7	0,4097	37,310	0,622	0,659
12x8	0	2/24 Dot	7	0,4097	23,045	0,384	1,067
12x8	1	1	7	0,4097	46,089	0,768	0,533
12x8	3	1	7	0,4097	46,089	0,768	0,533
12x8	3	2/24 Dot	7	0,4097	23,045	0,384	1,067
12x8	4	1	7	0,4097	46,089	0,768	0,533
12x8	4	2/24 Dot	7	0,4097	23,045	0,384	1,067
14x10	0	1	6	0,3908	36,213	0,604	0,648
14x10	0	1/16 Dot	6	0,3908	36,213	0,604	0,648
14x10	1	1	6	0,3908	36,213	0,604	0,648
14x10	3	1	6	0,3908	38,408	0,640	0,611
14x10	4	1	6	0,3908	38,408	0,640	0,611
16x10	0	1	6	0,3908	30,726	0,512	0,763
16x10	0	1/16 Dot	6	0,3908	31,823	0,530	0,737
16x10	1	1	6	0,3908	31,823	0,530	0,737
16x10	3	1	6	0,3908	30,726	0,512	0,763
16x10	4	1	6	0,3908	31,823	0,530	0,737
24x24	0	1	3	0,3432	21,947	0,366	0,938
24x24	3	1	3	0,3432	21,947	0,366	0,938
24x24	4	1	3	0,3432	21,947	0,366	0,938
BC 16	0	2 aus 5		0,3432	37,310	0,622	0,552
BC 16	1	2 aus 5		0,3432	37,310	0,622	0,552
BC 16	3	2 aus 5		0,3432	38,408	0,640	0,536
BC 24	0	2 aus 5		0,3432	29,629	0,494	0,695
BC 24	4	2 aus 5		0,3432	29,629	0,494	0,695
BC 24	3	2 aus 5		0,3432	29,629	0,494	0,695
G 16	0	1		0,3432	26,337	0,439	0,782
G 16	1	1		0,3432	26,337	0,439	0,782
G 16	3	1		0,3432	26,337	0,439	0,782
G 16	4	1		0,3432	26,337	0,439	0,782
G 24	0	1		0,3432	26,337	0,439	0,782
G 24	3	1		0,3432	26,337	0,439	0,782
G 24	4	1		0,3432	26,337	0,439	0,782