MUTOH *XpertJet* 1682SR PRO Print Speed Table *(2023-06-20, Based on firmware 1.02 testing with MS51)*

Mode	Resolution / Pass / Dot	Screen / Direction / Speed	Speed	Notes
High Quality	1200 x 1200 dpi 8-Pass Large or Small Dot Family (2-bit Var Dot)	I-Screen Fine / Bi-Dir / 360cps PQ100 (Or PQ1) / WF1 or 3 / IP_,2 / DN2 / CV2 / EF56	**9,7 m²/h** WF3: MS51=31,47 ml/m² WF1: MS51=37,96 ml/m²	Super Quality Extreme. (*Note: Small dot fam. advised only in headheight Low1. In headheight Low2, use Large dot profiles to avoid ink mist*)
Quality	1200 x 1200 dpi 8-Pass Large or Small Dot Family (2-bit Var Dot)	I-Screen Fine X / Bi-Dir / 360cps PQ100 (Or PQ1) / WF1 or 3 / IP_,2 / DN2 / CV2 / EF51	**13,0 m²/h** WF3: MS51=31,47 ml/m² WF1: MS51=37,96 ml/m²	Super Quality. (*Note: Small dot fam. advised only in headheight Low1. In headheight Low2, use Large dot profiles to avoid ink mist*)
Production	600 x 1200 dpi 4-Pass Large or Small Dot Family (2-bit Var Dot)	I-Screen Fine / Bi-Dir / 360cps PQ120 (Or PQ4) / WF1 or 3 / IP_,2 / DN2 / CV2 / EF56	**18,7 m²/h** WF3: MS51=15,74 ml/m² WF1: MS51=18,98 ml/m²	Quality Printing Good Quality on most images.
High Speed	600 x 1200 dpi 4-Pass Middle Dot Family (2-bit Var Dot)	I-Screen Fine / Bi-Dir / 460cps PQ120 (Or PQ4) / WF2 / IP_,2 / DN2 / CV2 / EF56	**22,9 m²/h** MS51=14,28 ml/m²	Normal Printing on most medias. (* Use only S and L dots)
Draft	600 x 1200 dpi 4-Pass Middle Dot Family (2-bit Var Dot)	I-Screen Fine X / Bi-Dir / 460cps PQ120 (Or PQ4) / WF2 / IP_,2 / DN2 / CV2 / EF51	**30,4 m²/h** MS51=14,28 ml/m²	Fast output. (* Use only S and L dots)
Superdraft	600 x 600 dpi 2-Pass Large Dot Family (1-bit Fixed Dot L)	None1 / Bi-Dir / 360cps PQ180 (Or PQ9) / WF1 / IP_,3 / DN2 / CV2 / EF0	**65,0 m²/h** MS51=9,49 ml/m²	Draft Quality (* Use fixed dot L)

Accufine i3200 dot sizes (picoliter)

	Large	Middle	Small
MS51 Large Fam. (WF1)	17,71	9,79	4,06
MS51 Middle Fam. (WF2)	13,33	9,06	3,65
MS51 Small Fam. (WF3)	14,69	4,48	3,44

22,9 m²/h (14,2 ml/m²)

Unprofiled 100% Single Channel ink, in ml per m²
For full gamut, a minimum of 10 ml/m² is advised.
Note that a higher number does not mean a higher ink consumption. Once a profile is used, the average ink usage is between 6 and 12ml, image depending.

(*) Important Profiling Tip :
If your Rip allows it, manipulate the vardot curve so that small dots are <30%, middle dots <60% (Large dots can be used to maximum 100%)
Or check the comments in this document on the right side of the printmode, to see what dot that should be disabled in order to get the best quality.

Small PM Command overview

- Resolution (dpi): *PQ (Print Quality)
    *PQ11; (Or 100)   = 1200 x 1200   (8p)
    *PQ4; (Or 120)   = 1200 x 600   (4p)
    *PQ9; (Or 180)   = 600 x 600   (2p)

- Dot Family (WF): *WF1;Large *WF2;Medium   *WF3;Small
- Pass / Dot: *IP4,2; 1st number is pass multiplier (2 or 4).
  The 2nd number is the dot size
  Note : using the pass multiplier is no longer advised
  The I-screen on 1682SR-Pro regulates the pass number
  automatically to obtain the best results.
  2=Vardot, 3=Large fix dot, 4= Middle fix dot, 5=Small fix dot
- Direction (Uni or Bi): *DN2; for Bi-Dir   *DN1; for Uni-Dir
- Carriage: *CV2; for high speed (460/360 dot fam. depending)
          *CV1; for low speed (320cps)
- Effect: *EF0; No Weaving
        *EF51; I-Screen Fine X   *EF56; I-Screen Fine
- Heaters: *FH40; (pre)   *PH40; (platen)   *DH50; (after)
  Note : With MS51 ink, set PH maximum to 35°
- Media (user) : *MS1; (Print with adjustments set in User 1)
Pro tip: To examine the PM commands from your rip, enable HeaderDump (Printermenu, Setup23 : Header Dump : On).
This will print a full PM command list after every print you make.

User Adjustments

Bi Dir adjustments (On Printerpanel per User)
Go to Setup - Usertype - Type# - Adjust Print - Thickness
(just skip thickness with Enter to set manual adjustment)
Select Adjust Print3: Auto (Preferred!) or Custom (Manual)
In case of Manual Adjust, do both Rough and Fine pattern!

Pattern A = Large Drop Family (WF1)	Low Carriage speed
Pattern B = Medium Drop Family (WF2)	Low Carriage speed
Pattern C = Small Drop Family (WF3)	Low Carriage speed
Pattern D = Large Drop Family (WF1)	High Carriage speed
Pattern E = Medium Drop Family (WF2)	High Carriage speed
Pattern F = Small Drop Family (WF3)	High Carriage speed

Pro Tip: In case of quality issues, print in Uni-dir to compare. Uni-dir printing needs no user adjustment and should always be very high quality. Uni-dir printing is also advised in case of drying issues or media cockling.

Step adjustments (On Printerpanel per User) PF (Paper Feed)
Go to Setup - Usertype - Type# - PF Adjust
Auto (Quick adjust) or Micro Print (user adjust)

Pro Tip: In case you doubt your PF adjust, measure your print. A print of 1000mm should differ maximum ±1mm.

Service Info

You are free to use any printmode combo that you need, but in case of quality issues, we will ask you to check at least our High Quality recomendation (8 pass mode) in both Uni and Bi-dir and to enable the headerdump so that we can exclude certain software issues.

The printmodes above have been tested in Low1 (1,4 mm) and Low2 (1,8 mm) headheight. In case you have need for a larger headgap, use Low carriage speed, Large Dot family profile, preferably using only large fixed dot to avoid ink mist.