MUTOH XpertJet 1641SR PRO Print Speed Table *(2023-06-20, Based on firmware 1.04 testing with **MS41 & MS51**)*

Super Quality	900 x 1200 dpi (Custom 4) 12-Pass Large or Small Dot Fam. (2-bit Var Dot)	I-Screen Fine H / Uni-Dir / 360cps PQ130 / WF1 or WF3 / IP_,2 / DN1 / CV2 / EF65	**3,6 m²/h** *MS41=22,78 /MS51=22,85 ml/m² (WF3)* *MS41=29,37 /MS51=27,90 ml/m² (WF1)*	Super Quality, and Super sharpness. *(Note: Small dot fam. advised only in headheight Low1. In Low2, use Large dot profiles to avoid ink mist)*
High Quality	900 x 1200 dpi (Custom 4) 12-Pass Large or Small Dot Fam. (2-bit Var Dot)	I-Screen Fine L / Bi-Dir / 360cps PQ130 / WF1 or WF3 / IP_,2 / DN2 / CV2 / EF63	**5,6 m²/h** *MS41=22,78 /MS51=22,85 ml/m² (WF3)* *MS41=29,37 /MS51=27,90 ml/m² (WF1)*	Super Quality. *(Note: Small dot fam. advised only in headheight Low1. In headheight Low2, use Large dot profiles to avoid ink mist)*
Quality	600 x 900 dpi (Custom 8) 6-Pass Large Dot Family (2-bit Var Dot)	I-Screen Fine H / Bi-Dir / 360cps PQ170 (Or PQ28) / WF1 / IP_,2 / DN2 / CV2 / EF65	**7,3 m²/h** *MS41=14,67 / MS51=13,95 ml/m²*	Quality Printing Good Quality on most images.
Normal	600 x 900 dpi (Custom 8) 6-Pass Large Dot Family (2-bit Var Dot)	I-Screen Fine M / Bi-Dir / 360cps PQ170 (Or PQ28) / WF1 / IP_,2 / DN2 / CV2 / EF64	**8,8 m²/h** *MS41=14,67 / MS51=13,95 ml/m²*	Normal Printing Normal quality on most medias.
Speed	600 x 600 dpi (Custom 9) 4-Pass Large Dot Family (2-bit Var Dot)	I-Screen Fine L / Bi-Dir / 360cps PQ180 (Or PQ9) / WF1 / IP_,2 / DN2 / CV2 / EF63	**11,2 m²/h** *MS41=9,78 / MS51=9,30 ml/m²*	Fast (acceptable) output.
High Speed	600 x 600 dpi (Custom 9) 4-Pass Large Dot Family (2-bit Var Dot)	Fine&Fog 3 / Bi-Dir / 360cps PQ180 (Or PQ9) / WF1 / IP_,2 / DN2 / CV2 / EF28	**15,5 m²/h** *MS41=9,78 / MS51=9,30 ml/m²*	Draft Quality.

Accufine i1600 dot sizes (picoliter)

	Large	Middle	Small
MS41 Large Fam. (WF1)	17,53	10,31	4,12
MS41 Middle Fam. (WF2)	13,20	9,07	4,12
MS41 Small Fam. (WF3)	13,61	4,43	2,58
MS51 Large Fam. (WF1)	16,67	9,27	3,96
MS51 Middle Fam. (WF2)	13,33	9,17	4,17
MS51 Small Fam. (WF3)	13,65	4,27	3,33
UMS Large Fam. only (WF1)	16,49	8,35	3,71

8,8 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 Tips :

1. In diagnostics, use Waveform Type B (MS41&51)
2. 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%)

Small PM Command overview

- Resolution (dpi): *PQ (Print Quality)

*PQ100; (Or 13)	= 1200 x 1200	(16p)
*PQ110;	= 1200 x 900	(12p)
*PQ130; (Or 29)	= 900 x 1200	(12p)
*PQ140;	= 900 x 900	(9p)
*PQ160;	= 600 x 1200	(8p)
*PQ170; (Or 28)	= 600 x 900	(6p)
*PQ180; (Or 9)	= 600 x 600	(4p)

- 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 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 *EF63; I-Screen Fine L *EF64; I-Screen Fine M *EF65; I-Screen Fine H
- Heaters: *FH40; (pre) *PH40; (platen) *DH50; (after) Note : With MS51 ink, PH should be maximum 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 recommendation (12 p. 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.

These modes are also valid for 1341SR-Pro. Printspeed in that case will be ±15% slower.

Note: 1341SR-Pro has different dot volume!

WF1 =	15,15 pl	8,66 pl	3,51 pl
WF2 =	11,13 pl	8,35 pl	3,30 pl
WF3 =	13,81 pl	4,54 pl	2,78 pl

MS41 & MS31 have 100% identical gamut, but profile exchange between these printers can result in a minor color difference.