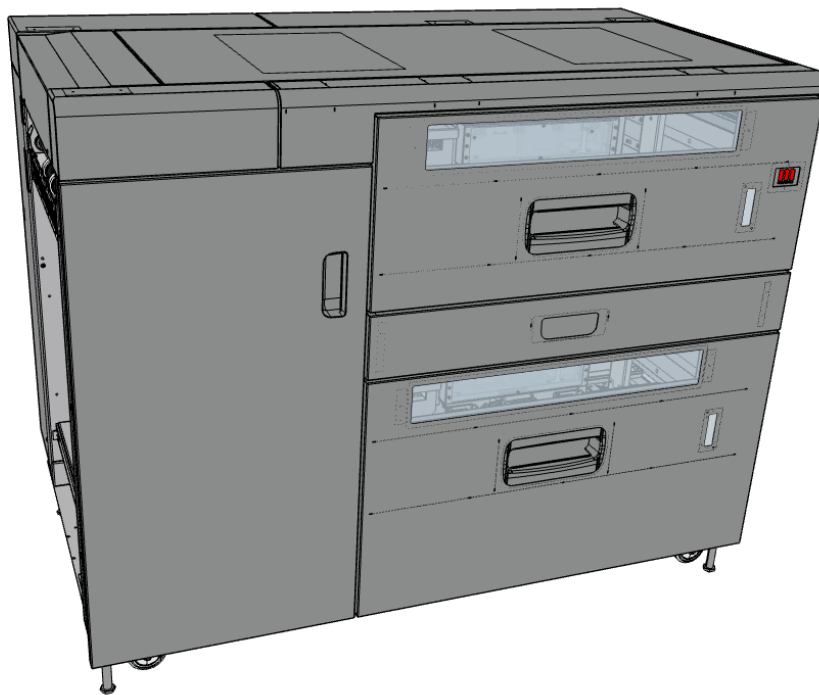


Customer Expectations Guide

Morgana VFX+



This CEG is intended as an aid in the discussions with customers prior to signing order and prior to planning the installation to set the correct expectations.



Introduction

The Morgana VFX+ is the latest high-capacity Vacuum Feeder platform developed and produced by Plockmatic Group.

The unit is capable of efficiently feeding a wide range of media types and weights at the rated speed of the downstream system. It is equipped with both vacuum and air assisted friction feed hybrid technology specifically designed to handle the widest range of pre-printed media.

Maximum productivity is achieved through Automatic Tray Switching, which enables long unattended runs and the loading of empty trays during a run.

The VFX+ module can be configured with one or two advanced vacuum paper trays*, capable of feeding stock up to 400 gsm. An optional Multi-Purpose Tray (MPT) is also available, adding a second or third pick point to further expand feeding capacity.

The MPT can be used to feed thick, pre-printed cover sheets when producing booklets with a downstream device, or simply to increase the module's total loading capacity.

**Note: it is not possible to upgrade a single tray configuration to a two-tray configuration.*

About this Guide

This Expectations Guide should be used as a tool in discussions with potential customers to help set expectations - by clearly explaining specification details, best practices, machine limitations, and tasks that need to be completed prior to and during installation.

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Product Overview

General Specifications, Main unit – VFX+

Feature	Specifications	Remarks
Speed	15k sheets/h	Actual configuration feed speed is controlled by downstream BM device
Structure	Vacuum Feeder with 1 or 2 trays	
Dimensions (L x W x H)	1374 x 889 x 1030 mm (54.1 x 35 x 40.6")	If optional MPT is installed, total height is equal to 1225mm (48.2")
Net Weight, single tray config	296kg / 652.6lb	
Net Weight, double tray config	355kg / 782.6lb	
Power consumption	Min 400W- Max 1200W when in use	Continuous Operation. See electrical requirements section of this document for further information
Power source	100-240V +6 -10% (50-60Hz)	
Product name	Morgana VFX+	
Paper separation method	Vacuum	
Temp Range	10-30°C	
Humidity	20-80% RH	Humidity kits are recommended when RH is over 60%. Anti-static kits are recommended when RH is below 40% and temperature is low or when printed sheets have high static charge.

Vacuum Tray Specification

Feature	Specifications	Remarks
Load capacity	1750 sheets per tray, up to 3500 sheets for the double tray configuration	80gsm plain paper
Custom size (Minimum)	120x210 mm / 4.72" x 8.27"	A5 LEF paper size feeding possible from upper vacuum tray if optional A5 LEF kit is installed. A5 LEF equals to 148x210mm or 5.83x8.27".
Custom size (Maximum)	356x660 mm / 14.0" x 26"	Spec of downstream system will limit specification for complete configuration
Paper weight (Trays)	64 - 350 gsm plain paper*	*400gsm supported on some media
Supported media (Trays)	Plain paper, Index paper*, coated paper, Recycled paper, Offset paper, transparent paper**	*Index paper supported with kit if TABS are fed trail edge. TAB lead edge feed does not require kit. **Transparent paper supported if dedicated kit is installed
Max curl level	5 mm (Cross process direction curl: $\pm$ 2 mm)	Flat curl, measured on a flat surface
Paper transporting order	Top feed	
Change paper size	Manual sheet size setup	
Side registration adjustment	Mechanical side guides, operator setting	
Max offset paper registration (Trays)	$\pm$ 2mm	
Double Feed Detection	Ultrasonic sensor in each tray	
Auto Sheet size detection	Both trays have Auto Sheet size detection	
In Tray lightning	LED will light up when a tray is active	
Paper indication (Each tray)	LED bar indicating how much paper is left: 0%, 25%, 50%, 75%, and 100%	LED bar also used to indicate jams

Multi-Purpose Tray Specification

Feature	Specifications	Remarks
Number of trays	1 (air friction hybrid)	Mounted on top of VFX+
Load capacity	64mm load capacity	Equals approximately to 640 sheets of 80 gsm plain paper
Custom size (Minimum)	120x210 mm / 4.72x8.3"	
Custom size (Maximum)	356x1300 mm / 14.0" x 51"	Spec of downstream system will limit specification for complete configuration
Supported media	Plain paper, Index paper, double sided coated paper, Recycled paper, Offset paper	Single coated paper not supported
Max curl level	7 mm (Cross process direction curl: $\pm$ 2 mm)	Flat curl, measured on a flat surface
Paper weight	80 - 350 gsm plain paper*	*450gsm supported on some media
Paper transporting order	Top feed	
Change paper size	Manual sheet size setup	
Side registration adjustment	Mechanical side guides, operator setting	
Max offset paper registration	$\pm$ 2mm	
Double feed detection	Ultrasonic sensor	
Auto sheet size detection	No	
In tray lightning	N/A	
Paper indication	LED bar indicating how much paper is left: 0%, 25%, 50%, 75%, and 100%	LED bar also used to indicate jams

Targeted Reliability

Feature	Value	Notes
Preventive Maintenance Interval	1 Million Sheets	
Unscheduled Maintenance Rate	1 visit per 1.2 million sheets	
Average monthly volume per tray	400 000 sheets / month	Sheets per tray
Max monthly volume per tray	800 000 sheets / month	
Life of product	24 million sheets / 5 years	
MTTR	1 Hour or less	For EM
Shutdown / Jam Rate, vacuum trays	1/3000 sheets	Plain paper, 120 gsm A3 or 11x17"
Shutdown / Jam Rate, optional Multi-Purpose Tray	1/2000 sheets	
Installation Time	30 – 45 minutes	Multi-Purpose Tray requires 15 additional minutes

Install Planning

Supported hardware configurations

VFX+ is available for the following Booklet Making platforms from Morgana:

BM4050e/BM4035e



Available options

The VFX+ offers a high level of customization thanks to the large offering of optional kits. The available kits and their functionalities are the following:

1. **Multi-Purpose Tray (MPT):** Adds a second or third pick point to the VFX+, increasing both flexibility and production capacity.



2. **Antistatic kits** (one for paper path, one for trays): Highly recommended for use in static environments or non-climate-controlled environments where humidity is low. Using these kits will improve Booklet Quality and/or reliability of the downstream system. The MPT cannot be equipped with any antistatic kit.



3. **Humidity kits** (one for vacuum trays, one for MPT): Highly recommended for use in environments when relative humidity is higher than 60%. Using these kits will improve Booklet Quality and/or reliability of the downstream system. The kits are also recommended when media will be stored in humid environment prior to feeding without any overnight storing in a climate-controlled room.



4. **Barcode reader kit:** The VFX+ can be equipped with an optional Barcode reading kit. The barcode kit enables variable page count jobs and ensures set integrity when document accuracy is critical. One kit includes one barcode reader and the mounting elements to install it in the vacuum tray. It is not possible to install a barcode reader kit on the Multi-Purpose Tray. Should both trays need to be equipped with a barcode reader, two kits need to be ordered. *NOTE: this kit is not available at launch*



5. **Care pack kit:** The Care pack kit is a collection of the most needed spare parts for the VFX+ Module. Keeping these parts handy will help in solving technical issues that arise with the machine and ultimately reduce machine downtime.



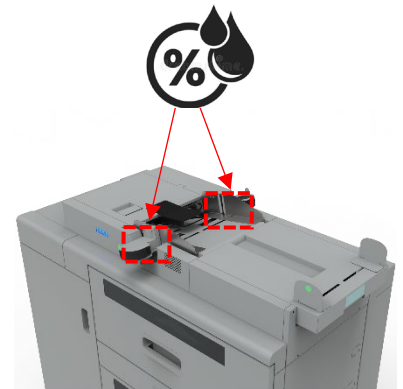
System Dependencies and Prerequisites

The following options have conditions depending on configuration:

Multi-Purpose Tray Humidity Kit

The Morgana VFX+ must be equipped with the following options to be able to be equipped with the MPT Humidity Kit:

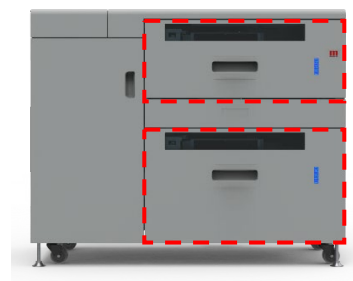
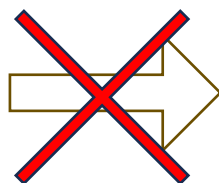
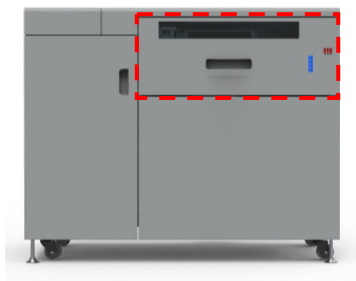
1. Multi-Purpose Tray
2. Vacuum Trays Humidity Kit



Other

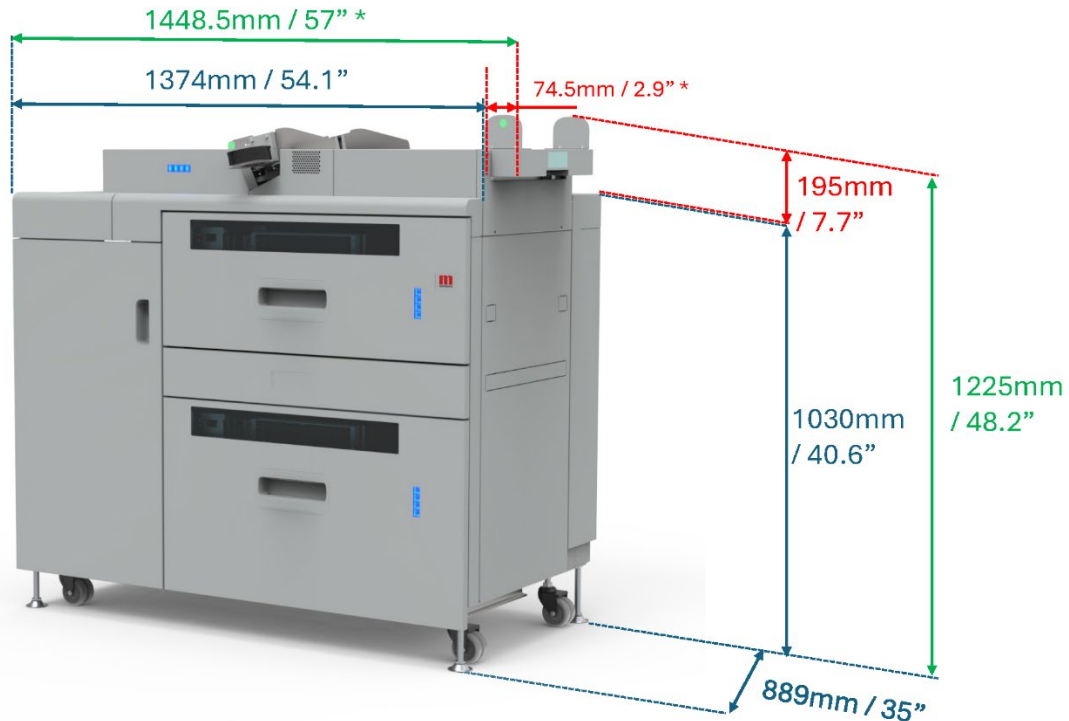
Single Tray OR Double Tray

For enhanced flexibility, the system can be equipped with either one or two trays from the factory. However, it is **never possible to upgrade a single tray module to a double tray module**.



Dimensions and weights

Footprint



Measurements in blue refer to the VFX+ main body (either single or double tray), measurements in red refer to the MPT, measurements in green refer to the two modules combined.

*The MPT's tray can be extended. When extended, it protrudes 480.5mm / 18.9" from the VFX+ main body. Therefore, the combined total length of the VFX+ main body and MPT is equal to 1854.5mm / 73" when the tray is extended. NOTE! When producing booklets, the MPT's tray never needs to be extended.

Net Weight

VFX+, single tray: 296kg / 652.6lb

VFX+, double tray: 355kg / 782.6lb

Multi-Purpose Tray: 40kg / 88.2lb

Product codes, weights and sizes

All main modules are shipped in palletized cardboard boxes. Pallet jack or forklift is needed to move pallets around premises.

		VFX+ single	VFX+ double	Multi-Purpose Tray	Anti-static Kit Paper Path
Item Name		VFX+ single tray	VFX+ double tray	Multi-Purpose Tray	Anti-static Kit for Paper Path
Country of Origin		Latvia	Latvia	Latvia	Latvia
Plockmatic Part no		12506400	12506300	12500041	12500039
Weight	Net	296kg / 652.6lb	355kg / 782.6lb	40kg / 88.2lb	9kg / 19.8lb
	Gross	241kg / 531.3lb	300kg / 661.4lb	63kg / 138.9lb	10kg / 22lb
Packing Method		Cardboard on pallet	Cardboard on pallet	Cardboard on pallet	Carton
Packing Dimension	L	1600mm / 63"	1600mm / 63"	1200mm / 47.2"	550mm / 21.7"
	W	900mm / 35.4"	900mm / 35.4"	800mm / 31.5"	365mm / 14.4"
	H	1300mm / 51.2"	1300mm / 51.2"	730mm / 28.7"	95mm / 3.7"
Number of units/CTN		1	1	1	1
Max Stack Height	Storage	TBD	TBD	TBD	TBD
	Transport	TBD	TBD	TBD	TBD

		Anti-static Kit Tray	Humidity Kit, Vacuum Trays	Humidity Kit, MPT	Barcode reader	Care pack kit
Item Name		Anti-static Kit for Tray	Humidity Kit for Vacuum Trays	Humidity Kit for Multi-Purpose	Barcode reader	Care pack kit for VFX+
Country of Origin		Latvia	Latvia	Latvia	Latvia	Latvia
Plockmatic Part no		12500040	14000011	14000012	12500038	12500043
Weight	Net	0.4kg / 0.9lb	7.2kg / 15.9lb	0.4kg / 0.9lb	0.4kg / 0.9lb	TBD
	Gross	0.5kg / 1.1lb	8.7kg / 19.2lb	0.5kg / 1.1lb	0.5kg / 1.1lb	TBD
Packing Method		Carton	Carton	Carton	Carton	Carton
Packing Dimension	L	120mm / 4.7"	730mm / 28.7"	260mm / 10.2"	325mm / 12.8"	TBD
	W	80mm / 3.2"	310mm / 12.2"	160mm / 6.3"	235mm / 9.3"	TBD
	H	70mm / 2.8"	140mm / 5.5"	120mm / 4.7"	95mm / 3.7"	TBD
Number of units/CTN		1	1*	1	1	1

*One kit contains parts to update both vacuum trays.

Electrical Requirements

Electrical Requirements VFX+	Electrical Requirements Humidity Kit
• Universal power supply • 100-240 V + 6%/-10%, 50-60 Hz • Rating: 12-5A • Max Current 12A in 100Vac • Max Current 5A in 230Vac • Max power consumption W (4100 BTU/hr) • Min-Max when in use 400W-1200W • Standby ready: 120W • Standby open interlock: 50W Europe: • Wall fuse: Min 10A for 200-240Vac North America: • Wall fuse: Min 15A for 100-140Vac	• Universal power supply • 100-240 V + 6%/-10%, 50-60 Hz • Rating: 12-5A • Max Current 10A in 100Vac • Max Current 4.5A in 230Vac • Max power consumption W (3400 BTU/hr) • Min-Max when in use 50W-1000W • Standby ready: 50W • Standby open interlock: 0W Europe: • Wall fuse: Min 10A for 200-240Vac North America: • Wall fuse: Min 15A for 100-140Vac

Environmental Requirements



The Module is tested in the following environmental zones:

Air humidity: 20% - 80% RH

Temperature: 10 – 30 degrees Celsius or 50 – 86 degrees Fahrenheit

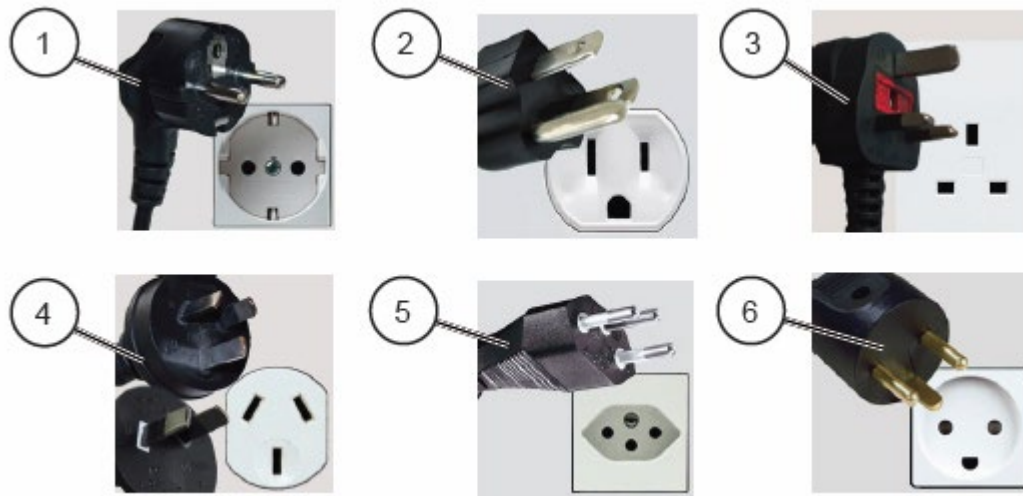
For optimum performance of the system, environment should be kept within 40% - 50% RH and room temperature should be within 18 – 26 degrees Celsius or 64 – 78 degrees Fahrenheit.

Low humidity (below 40% RH) and lower temperatures increase the risk of static issues.

High humidity (over 60% RH) and higher temperatures increase the risk of feeding issues. Also storing media under humid conditions before processing may result in higher jam rates. If media is stored in humid conditions above 60% RH the optional Humidity kits are recommended.

Power cords

The following power cords are included in the VFX+*:



1. European plug
2. USA, Canada, Mexico & Japan
3. United Kingdom, Ireland, Malta, Malaysia & Singapore
4. Australia, New Zealand, China & Argentina
5. Brazil and South Africa
6. Denmark

*The optional Humidity kit for the Vacuum Trays also includes a similar power cord kit with the same type of plugs.

Estimated Installation Time

Installing a VFX Module takes approximately 30-45 minutes. Installing a Multi-Purpose Tray requires 15 additional minutes.

Limitations

Main Module

- When loading paper in the trays of the VFX+, make sure that it has the same direction of paper curl: paper with different curl directions cannot be mixed, doing so would result in a misfeed or a jam.
- When loading paper in the trays of the VFX+ make sure that its wave curl is not greater than 2 mm otherwise a paper jam might occur.
- Auto Feeder Mode in the screen Advanced Feeder Settings is optimized for pre-printed papers. When running white un-printed papers in Auto Feeder Mode, fan settings may not work correctly. For optimum performance on un-printed papers, please turn off Auto Feeder Mode and follow procedure for MANUAL fan settings described in the operator manual.
- For optimum performance in the VFX+, media shall be stored in a climate-controlled environment. For media stored in environment with relative humidity over 50% performance of the VFX+ may be reduced. The following media types have shown this phenomenon: Mondi Color Copy Gloss 250 gsm A4 SEF.
- Thin media <70 gsm with smaller sheet sizes (A4 SEF, 8.5 x 11" SEF or A5 LEF) may show higher jam rate than normal. The following media types have shown this phenomenon: My Paper / 67 gsm / A5.
- For media that is less flexible (stiff) media in the interval 350 gsm – 400 gsm feeding may not be possible. The following media types have shown this phenomenon: River Shetland paper / 350 gsm / SRA3.
- The VFX+ might produce pressure marks on lowest paper in the paper pile if media is sensitive.
- The VFX+ is suited for customers whose processing needs will not exceed a monthly average of 400,000 sheets from each tray.
- The VFX+ might show marks from the vacuum belts when running extra thin media. This issue might occur when using 80 gsm plain and 100 gsm coated types of paper. The recommended solution to this is that of using MANUAL process settings (rather than Auto Feeder Mode) and to reduce the vacuum amount. This will reduce / eliminate such marks.
- When the trays in the VFX+ are used in MANUAL MODE, the Process Position can only be set to 10 or lower. If higher Process Position is used, MAX load capacity will be reduced by approximately 5 to 10 mm.
- In humid non-climate-controlled environments an increased number of double feed jams has been observed in the VFX+. In such cases, it is recommended to install the optional humidity kit(s).
- If humidity kit (heater kit) is installed, the recommendation is to set it to AUTO or to OFF when the humidity is below 50%.
- For optimum feeding performance in the VFX+, the paper stack should be "fanned" by the operator prior to loading the tray. This reduces the risk of double feed from the trays. For more information, see "Paper Stack Preparation" in section 1 "Basics".
- The Ultrasonic Double Sheet Detection Sensors in the VFX+ does NOT work on all 400 gsm types of paper, as paper density can vary significantly (900/50 = 1800% in one sheet).
- The trays in the VFX+ might have problems feeding the last sheet when processing thicker media (thicker than 350 gsm).

Optional Multi-Purpose Tray

- The MPT might have problems feeding electrostatically charged paper.
- The MPT might have problems feeding thin and coated media.
- If the machine is placed under a direct light source, the Paper Empty sensor on the MPT (Q505) might give false readings.
- The MPT may show marks in the lead edge of the sheets from the separation process. Reducing separation pressure may improve.
- The MPT may have difficulties separating and feeding textured media, Textured media may feed better from the vacuum trays.

- The MPT may have difficulties separating some coated media with extra high friction between the sheets. This phenomenon has been observed on some high gloss media types. These media types may feed better from the vacuum trays.
- The MPT does not support feeding of single sided coated media.