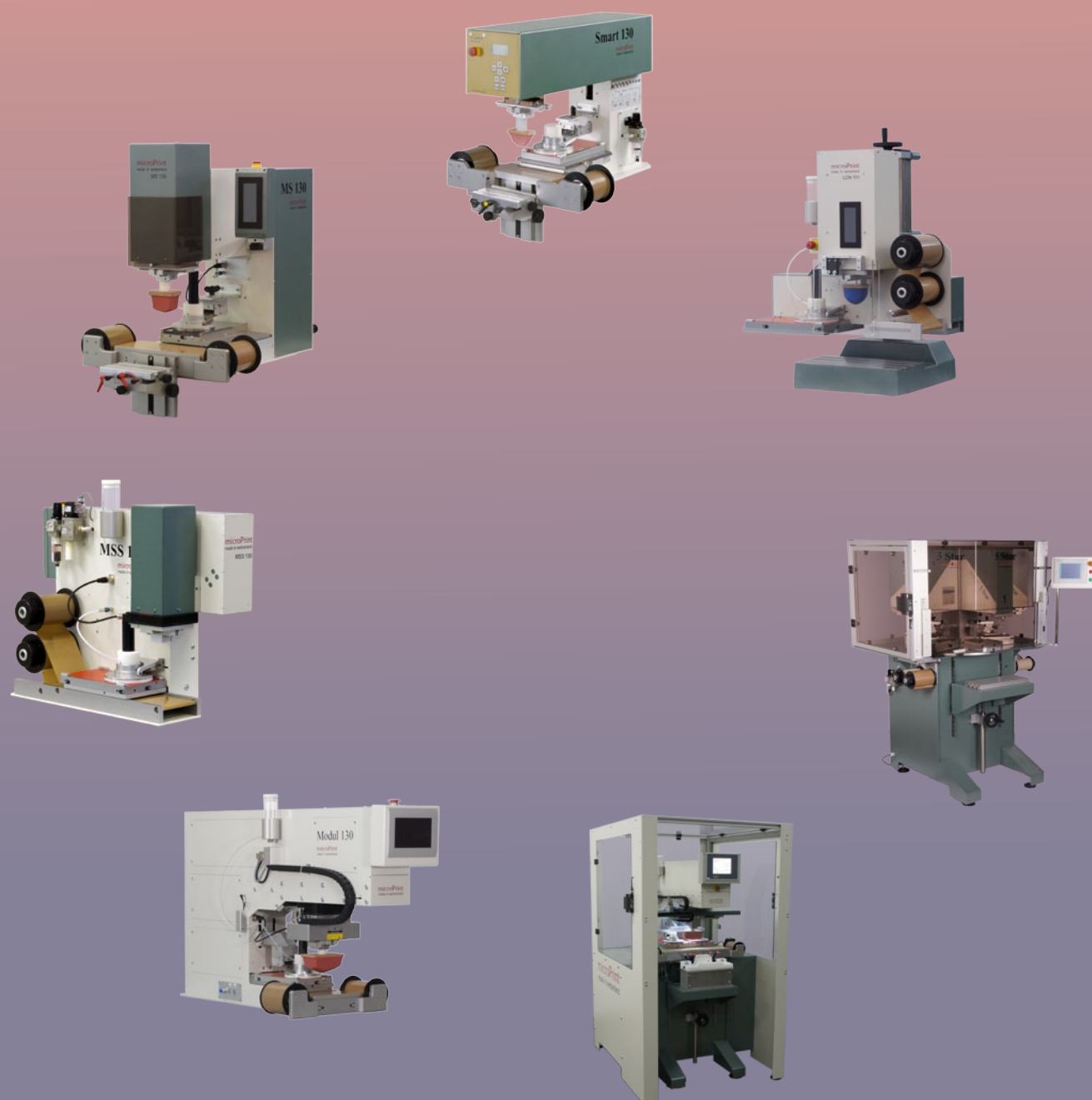


Pad printing catalog



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1 Introduction

1.1 Printing processes



Single-color Printing

A single-color print refers to the transfer of one print image from cliché to print object. It is the simplest type of printing and included in every basic pad printer.



2-color Printing

In a 2-color print you can transfer two images via cliché. One image after the other is printed on the print object. This type of printing requires a 2-position Pad Shuttle or a 2-position Shuttle Table.



Multi-color Printing

In a multi-color print the cliché transfers several print images. This type of printing requires a multi-position Pad Shuttle or a multi-position Shuttle Table.



Selective Printing

In a selective print you can find several print images on one cliché. With the help of an interface you can select a higher-level control to choose the desired print image.



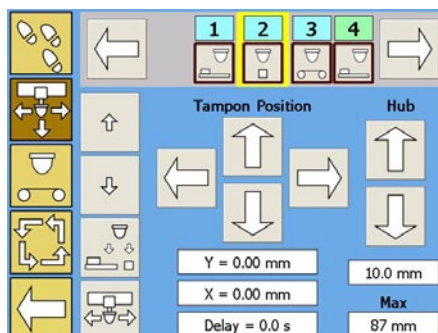
Sequence Printing

In sequential printing the print order can be freely selected. The cliché can have several print images which are transferred to freely selected positions on the print object.

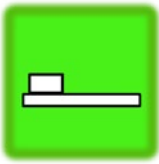
The order of printing is predetermined graphically.



Then you can set the XYZ position for each step.

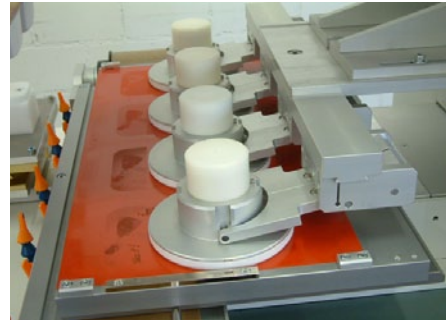
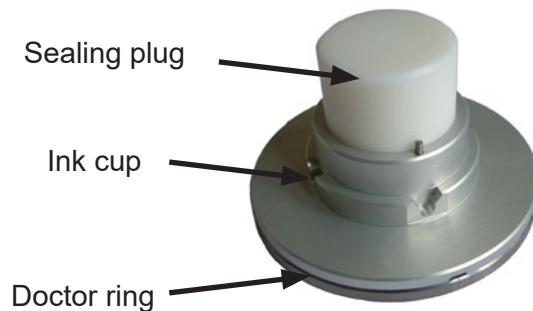


1.2 Inkwell



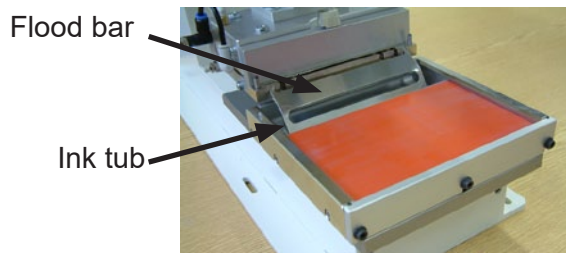
Closed inkwell

The closed system consists of an inverted cup with a doctor ring. The doctor ring is made either of hard metal or ceramics. It has the task of removing excess ink from the cliché. The cup is filled with ink and simply dragged over the cliché. The advantage is that the ink is completely sealed in and needs much less maintenance. There's practically no odor emission.



Open inkwell

In an open system, the flood bar floods the cliché with ink from the ink cup. Then the doctor blade removes any excessive ink from the cliché. The advantage over a closed system is the small cliché surface.



Doctor blade



Transverse doctoring unit

The transverse doctoring unit is a system for very long print images in a closed inkwell. The cup must move repeatedly over the long cliché. The print image is larger than the area the used cup can cover. To prevent the ink from drying on the cliché image, the cup moves non-stop back and forth over the cliché image.



1.3 Options



Viscomat

The viscosity of the ink is extremely important for the print. With an open system you have to stop the printing process every 30 to 40 minutes to dilute the ink. With a closed system this interval is much longer, but even here the thinner evaporates through the movement of the cup on the cliché. The Viscomat measures the viscosity of the ink in the cup and adds automatically thinner to the ink as needed. By doing so the ink's viscosity is kept stable and print errors can be prevented.



Pad cleaning

Pads may become soiled with ink, with dirt from the part to be printed or by attracting dust particles from the air. Therefore a pad must be cleaned from time to time. By using an automatic pad cleaning you no longer have to stop the machine. Pad cleanings used big systems guarantee less scrap.



Pad cleaning tape control

The cleaning tape is monitored to stop the unit and signal the user that he needs to react.



Parameter can be saved

With these pad printers you can save the parameters of printing jobs and retrieve them for later production.



Print Control

Print Control is a software program used to save and back-up all print orders of a pad printing machine on a PC. If needed the print orders can be accessed and loaded back into the printer.

2 Pad printing machines

2.1 Overview

2.1.1 Pneumatic pad printing machines

These pneumatic machines can set the pad stroke freely via the control. The XY positions of the print image are set mechanically.



Smart line

The Smart line is an inexpensive, pneumatic pad printing machines for manual use. It's a manageable machine for large and small series. It can be expanded into a multi-color print center.

Printing processes	Inkwell	Options
  	 	



LCN line

The pneumatic machines of the LCN line are primarily built into fully automated lines. These extremely robust machines are equipped with all functions necessary for reliable working in a compound system including pad cleaning and automatic ink thinner.

The LCN needs very little space and can be accessed from the front. If the machine is suspended, it can also print very large objects.

Printing processes	Inkwell	Options
		  



MS line

The MS line is a conventional, pneumatic machine line with every modern option such as automatic pad cleaning and automatic viscosity control. These machines can be equipped with auxiliary devices (such as transverse doctoring units, print object rotating device, etc.)

Printing processes	Inkwell	Options
  	  	  



MSS line

The printers of the MSS line come with a pneumatic swivel head (90°). These pad printers are used to print vertical surfaces. Also available with automatic pad cleaning and automatic viscosity control.

Printing processes	Inkwell	Options
		  



5-Star line

Our 5-Star comprises 5 pneumatic print-heads which are arranged in the form of a star. This star is rotated with a servo motor so that one print-head after the other can transfer its print image onto the print object. This set-up allows high performance with only one parts retainer.

Printing processes	Inkwell	Options
  		   

2.1.2 Pad printing machines with linear motor

These machines can set the pad stroke and the XYZ-position freely via the touchscreen display.



Modul line

The Modul line provides sophisticated one-color pad printers with XYZ pad positioning and sequence programmable prints. The Modul printers are available in three types; as stand-alone, as part of an automation or as a stand-alone machine with reduced functionality. As part of an automation, several Modules can be controlled over a display. Equipped with modern controls, these machines can be adapted according to the customer's specifications.

Printing processes	Inkwell	Options
  		    



ML line

The ML line is the multi-color print model of the Modul line. In addition to pad positioning in XYZ direction, the print object can also be rotated around two axes. As a result the ML machines can complete the most complex printing tasks in one single step. As the print object no longer needs to be printed in several goes, you save time and money. These machines are expandable as needed.

Printing processes	Inkwell	Options
    	  	    

2.2 Smart line

2.2.1 Smart 130



Printing capacity		Without cleaning			With cleaning		
		1700 /h			1200 /h		
Pad stroke		Drive	Max. stroke		Space		Force
		Pneumatic	80 mm		140 mm		960 N
Cleaning		Drive	Tape width			Control	
		-	115 mm			-	
Y- movement		Drive	Projection			Position	
		Pneumatic	69 mm			Fix (100/120 mm)	
Cliché		Drive	Angle			Position	
		Pneumatic	Fix			Fix	
	Cups	56	70	86	120	140	160
	Max. size	1	1	1	1	-	-
	Max. size	130 x 250 x 10/0.5 mm					
		150 x 120 x 10/0.5 mm					

Product ID	Type	Description
1 10 0 132	Smart 130	Smart 130 without pad cleaning, without accessories
1 10 0 134	Smart 130 TR	Smart 130 with pad cleaning, without accessories

2.2.2 Smart 250

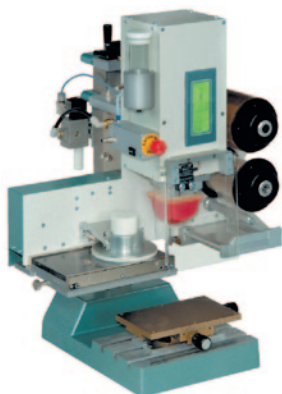


Printing capacity		Without cleaning		With cleaning					
		1700 /h		1200 /h					
Pad stroke		Drive		Max. stroke		Space		Force	
		Pneumatic		80 mm		140 mm		960 N	
Cleaning		Drive		Tape width				Control	
		-		115 mm				-	
Y- movement		Drive		Projection				Position	
		Pneumatic		69 mm				Fix	
Cliché		Drive		Angle				Position	
		Pneumatic		Fix				Fix (100/120 mm)	
	Cups	56	70	86	120	140	160		
	Max. size	4	3	2	2	-	-		
	Max. size	260 x 250 x 10/0.5 mm							
	Max. size	250 x 120 x 10/0.5 mm							
	Pad shuttle	Type	Drive	Adjustment		Stroke			
	2-color printing	SM 250	Pneumatic	Pos. / Angle		130 mm			
	Pad shuttle	Type	Drive	Adjustment		Stroke			
	3-color printing	FT 2-3	Pneumatic	Pos.		± 80 mm			

Product ID	Type	Description
1 10 0 252	Smart 250	Smart 250 without pad cleaning, without accessories
1 10 0 253	Smart 250 TR	Smart 250 with pad cleaning, without accessories

2.3 LCN line

2.3.1 LCN 131



Printing capacity		Without cleaning		With cleaning			
		2000 /h		1200 /h			
Pad stroke		Drive	Max. stroke	Space		Force	
		Pneumatic	150 mm	95 mm		480 N	
Cleaning		Drive	Tape width		Control		
		Pneumatic	115 mm		Optional		
Cliché		Drive	Angle		Position		
		Pneumatic	Fix		Fix (100 mm)		
	Cups	56	70	86	120	140	160
		1	1	1	1	-	-
		Max. size	130 x 230 x 10/0.5 mm				

Product ID	Type	Description
1 11 3 011	LCN 131	LCN 131 with pad cleaning, without accessories

2.3.2 LCN 133



Printing capacity		Without cleaning			With cleaning		
		1800 /h			1200 /h		
Pad stroke		Drive	Max. stroke	Space		Force	
		Pneumatic	170 mm	120 mm		1100 N	
Cleaning		Drive	Tape width			Control	
		Pneumatic	194 mm			Optional	
Cliché		Drive	Angle			Position	
		Pneumatic	Fix			Fix (115 mm)	
	Cups	56	70	86	120	140	160
		3	2	2	1	-	-
	Max. size	200 x 250 x 10/0.5 mm					

Product ID	Type	Description
1 32 0 012	LCN 133	LCN 133 with pad cleaning, without accessories

2.3.3 LCN 151



Printing capacity		Without cleaning			With cleaning		
		1800 /h			1200 /h		
Pad stroke		Drive	Max. stroke	Space		Force	
		Pneumatic	170 mm	120 mm		1100 N	
Cleaning		Drive	Tape width		Control		
		Pneumatic	138 mm		Optional		
Cliché		Drive	Angle		Position		
		Pneumatic	Fix		Fix (150 mm)		
	Cups	56	70	86	120	140	160
		-	-	-	1	1	-
	Max. size	150 x 300 x 10/0.5 mm					

Product ID	Type	Description
1 15 0 017	LCN 151	LCN 151 with pad cleaning, without accessories

2.4 MS line

2.4.1 MS 130



Printing capacity		Without cleaning		With cleaning			
		1600 /h		1200 /h			
Pad stroke		Drive	Max. stroke	Space		Force	
		Pneumatic	150 mm	150 mm		480 N	
Cleaning		Drive	Tape width		Control		
		-	115 mm		Optional		
Y- movement		Drive	Projection		Position		
		Pneumatic	Max. 125 mm		Front and back with turning knob		
Cliché		Drive	Angle		Position		
		Pneumatic	Fix		In front fix, back with turning knob		
	Cups	56	70	86	120	140	160
		1	1	1	1	-	-
Max. size		130 x 250 x 10/0.5 mm					
	Max. size	120 x 120 x 10/0.5 mm					

Product ID	Type	Description
1 36 0 010	MS 130	MS 130 without pad cleaning, without accessories

2.4.2 MS 250



Printing capacity		Without cleaning				With cleaning	
		1500 /h				1000 /h	
Pad stroke		Drive	Max. stroke		Space		Force
		Pneumatic	150 mm		150 mm		750 N
Cleaning		Drive	Tape width			Control	
		-	115 mm			Optional	
Y- movement		Drive	Projection			Position	
		Pneumatic	Max. 125 mm			Front and back with turning knob	
Cliché		Drive	Angle			Position	
		Pneumatic	Fix			In front fix, back with turning knob	
	Cups	56	70	86	120	140	160
	Max. size	4	3	2	2	-	-
	Max. size	260 x 250 x 10/0.5 mm					
	Max. size	250 x 120 x 10/0.5 mm					
	Cups	56	70	86	120	140	160
	Max. size	1	1	1	-	-	-
		430 x 100 x 0.5 mm					
	Pad shuttle	Type	Drive		Adjustment		Stroke
	3-color printing	FT 2-3	Pneumatic		Pos.		± 80 mm
	Part shuttle	Type	Drive		Adjustment		Stroke
		VT 2 150	Pneumatic		Pos.		120-160 mm
	Pad shuttle	Type	Drive		Adjustment		Stroke
		MFT 250	Linear motor		Display		± 100 mm

Product ID	Type	Description
1 38 1 000	MS 250	MS 250 without pad cleaning, without accessories

2.4.3 MS 350



Printing capacity		Without cleaning				With cleaning	
		1200 /h				1000 /h	
Pad stroke		Drive	Max. stroke		Space	Force	
		Pneumatic	150 mm		140 mm	1100 N	
Cleaning		Drive	Tape width			Control	
		-	115 mm			Optional	
Y- movement		Drive	Projection			Position	
		Pneumatic	Max. 75 mm			Front and back with turning knob	
Cliché		Drive	Angle			Position	
		Pneumatic	Fix			In front fix, back with turning knob	
	Cups	56	70	86	120	140	160
	Max. size	6	5	4	3	-	-
	Max. size	400 x 250 x 10/0.5 mm					
	Max. size	350 x 120 x 10/0.5 mm					
	Cups	56	70	86	120	140	160
	Max. size	1	1	1	1	-	-
	Max. size	600 x 130 x 0.5 mm					
	Part shuttle	Type	Drive		Adjustment		Stroke
	Pad shuttle	VT 2 150	Pneumatic		Mech. Pos.		120-160 mm
		Type	Drive		Adjustment		Stroke
	Part shuttle	MFT 250	Linear motor		Display		± 100 mm
		Type	Drive		Adjustment		Stroke
		VT x 450 s	Stepping motor		Display		450 mm
Product ID	Type	Description					
1 42 0 010	MS 350	MS 350 without pad cleaning, without accessories					

2.4.4 MS 500



Printing capacity		Without cleaning				With cleaning	
		1000 /h				780 /h	
Pad stroke		Drive		Max. stroke	Space		Force
		Pneumatic		170 mm		220 mm	
Cleaning		Drive		Tape width		Control	
		-		Max. 138 mm		Optional	
Y- movement		Drive		Projection		Position	
		Pneumatic		135 mm		Front and back with turning knob	
Cliché		Drive		Angle		Position	
		Pneumatic		Fix		In front fix, back with turning knob	
	Cups	56	70	86	120	140	160
	Max. size	8	6	5	4	3	-
	Max. size	520 x 300 x 10/0.5 mm					
	Cups	56	70	86	120	140	160
	Max. size	1	1	1	1	-	-
	Cups	56	70	86	120	140	160
	Max. size	1	1	1	1	-	-
	Pad shuttle	Type	Drive		Adjustment		Stroke
		MFT 350	Linear motor		Display		± 130 mm
	Part shuttle	MFT 501	Linear motor		Display		± 200 mm
		Type	Drive		Adjustment		Stroke
	Part shuttle	VT x 680 s		Stepping motor		Display	
						680 mm	

Product ID	Type	Description
1 51 0 000	MS 500	MS 500 without pad cleaning, without accessories

2.5 MSS line

2.5.1 MSS 130



Printing capacity		Without cleaning			With cleaning		
		1800 /h			1200 /h		
Pad stroke		Drive	Max. stroke		Space	Force	
		Pneumatic	120 mm		110 mm	480 N	
Cleaning		Drive		Tape width		Control	
		-		115 mm		Optional	
Y- movement		Drive		Projection		Position	
		Pneumatic		90°		Fix	
Cliché		Drive		Angle		Position	
		Pneumatic		Fix		In front fix, back with turning knop	
	Cups	56	70	86	120	140	160
		-	-	1	1	-	-
	Max. size	130 x 230 x 10/0.5 mm					

Product ID	Type	Description
1 37 0 010	MSS 130	MSS 130 with pad cleaning, without accessories
1 37 0 011	MSS 130 s	MSS 130 mirror inverted with pad cleaning, without accessories

2.5.2 MSS 350



Printing capacity		Without cleaning			With cleaning		
		1200 /h			900 /h		
Pad stroke		Drive	Max. stroke		Space	Force	
		Pneumatic	90 mm		140 mm	1100 N	
Cleaning		Drive	Tape width			Control	
		-	115 mm			Optional	
Y- movement		Drive	Projection			Position	
		Pneumatic	90°			Fix	
Cliché		Drive	Angle			Position	
		Pneumatic	Fix			In front fix, back with turning knob	
	Cups	56	70	86	120	140	160
		6	5	4	3	-	-
	Max. size	400 x 250 x 0.5 mm / 260 x 250 x 10 mm					

Product ID	Type	Description
1 43 0 000	MSS 350	MSS 350 without pad cleaning, without accessories

2.6 5-Star



Printing capacity		Without cleaning			With cleaning		
		2500 /h			2500 /h		
Pad stroke		Drive	Max. stroke		Space	Force	
		Pneumatic	190 mm		140mm	1100 N	
Cleaning		Drive	Tape width			Control	
		-	138 mm			Optional	
Cliché		Drive	Angle			Position	
		Pneumatic	Fix			100/120 mm	
	Cups	56	70	86	120	140	160
		-	-	5	5	-	-
	Max. size	130 x 250 x 10/0.5 mm					
Product ID	Type	Description					
1 73 1 000	5-Star	5-Star with one pad cleaning, without accessories					

2.7 Modul line

2.7.1 Modul 110



Printing capacity		Without cleaning			With cleaning		
		1800 /h			1200 /h		
Pad stroke		Drive	Max. stroke	Space	Force		
		Pneumatic	90 mm	172 mm	290 N		
Cleaning		Drive	Tape width		Control		
		-	100 mm		Optional		
Y- movement		Drive	Projection		Position		
		Linear motor	139 mm		Via display		
Cliché		Drive	Angle		Position		
		Pneumatic	Via screws		Fix		
	Cups	56	70	86	120	140	160
		1	1	1	-	-	-
	Max. size	100 x 200 x 10/0.5 mm					

Product ID	Type	Description
1 85 1 141	Modul 110 PLPP	Modul 110 Stand-alone machine with reduced functionality, without pad cleaning, without accessories

2.7.2 Modul 130



Printing capacity		Without cleaning			With cleaning		
		1800 /h			1200 /h		
Pad stroke		Drive	Max. stroke		Space	Force	
		Pneumatic	140 mm		220 mm	750 N	
Cleaning		Drive	Tape width			Control	
		-	115 mm			Optional	
Y- movement		Drive	Projection			Position	
		Linear motor	170 mm			Via display	
Cliché		Drive	Angle			Position	
		Pneumatic	Via screws			Fix	
	Cups	56	70	86	120	140	160
	Max. size	1	1	1	1	-	-
	Pad shuttle	Type	Drive		Adjustment		Stroke
		MFT 80	Linear motor		Display		± 40 mm
		MFT 160	Linear motor		Display		± 80 mm

Product ID	Type	Description
1 85 1 133	Modul 130 BLPP	Stand-alone machine without pad cleaning, without accessories
1 85 1 134	Modul 130 ALPP	Add-on version (part of an automation) without pad cleaning, without accessories, without control

2.7.3 Modul 170



Printing capacity		Without cleaning				With cleaning	
		1600 /h				1100 /h	
Pad stroke		Drive	Max. stroke		Space	Force	
		Pneumatic	160 mm		230 mm	1750 N	
Cleaning		Drive	Tape width			Control	
		-	138 mm			Optional	
Y- movement		Drive	Projection			Position	
		Linear motor	225 mm			Via display	
Cliché		Drive	Angle			Position	
		Pneumatic	Via screws			Fix or program- mable	
	Cups	56/70/86	120	140	160	180	200
		1	1	1	1	-	-
	Max. size	170 x 330 x 10/0.5 mm					
	Pad shuttle	Type	Drive	Adjustment		Stroke	
		MFT 120	Linear motor	Display		± 60 mm	
		MFT 160	Linear motor	Display		± 80 mm	

Product ID	Type	Description
1 85 1 170	Modul 170 BLPP	Stand-alone machine without pad cleaning, without accessories
1 85 1 174	Modul 170 ALPP	Add-on version (part of a automation) without pad cleaning, without accessories, without control

2.7.4 Modul 220



Printing capacity		Without cleaning			With cleaning		
		1500 /h			1000 /h		
Pad stroke		Drive	Max. stroke		Space		Force
		Pneumatic	190 mm		250 mm		3014 N
Cleaning		Drive	Tape width			Control	
		-	194 mm			Optional	
Y- movement		Drive	Projection			Position	
		Linear motor	260 mm			Via display	
Cliché		Drive	Angle			Position	
		Pneumatic	Via screws			Fix or program- mable	
	Cups	56/70/86	120	140	160	180	200
		-	1	1	1	1	1
	Max. size	220 x 420 x 10/0.5 mm					
	Pad shuttle	Type	Drive		Adjustment		Stroke
		MFT 120	Linear motor		Display		± 60 mm
		MFT 160	Linear motor		Display		± 80 mm

Product ID	Type	Description
1 85 1 223	Modul 220 BLPP	Stand-alone machine without pad cleaning, without accessories
1 85 1 224	Modul 220 ALPP	Add-on version (part of a automation) without pad cleaning, without accessories, without control

2.8 ML line

2.8.1 ML 350



Printing capacity		Without cleaning				With cleaning	
		1500 /h				970 /h	
Pad stroke		Drive	Max. stroke		Space	Force	
		Pneumatic	140 mm		210 mm	1750 N	
Cleaning		Drive	Tape width			Control	
		-	138 mm			Optional	
Y- movement		Drive	Projection			Position	
		Linear motor	120 mm			Via display	
Cliché		Drive	Angle			Position	
		Pneumatic	Fix			In front fix, back with turning knob	
	Cups	56	70	86	120	140	160
	Max. size	6	5	4	3	2	-
	Max. size	400 x 300 x 10/0.5 mm					
	Cups	56	70	86	120	140	160
		1	1	1	1	-	-
	Max. size	600 x 130 x 0.5 mm					
	Part shuttle	Type	Drive		Adjustment		Stroke
		VT 2 150	Pneumatic		Mech. Pos.		120-160 mm
	Pad shuttle	Type	Drive		Adjustment		Stroke
		MFT 250/S	Linear motor		Display		± 100 mm
		MFT 350/S	Linear motor		Display		± 130 mm
	Part shuttle	Type	Drive		Adjustment		Stroke
		VT x 450 s	Stepping motor		Display		450 mm
Product ID	Type	Description					
1 42 0 020	ML 350 BLPP	Stand-alone machine without pad cleaning, without accessories					
1 42 0 021	ML 350 ALPP	Add-on version (part of a automation) without pad cleaning, without accessories, without control					

2.8.2 ML 500



Printing capacity		Without cleaning				With cleaning	
		900 /h		700 /h			
Pad stroke		Drive	Max. stroke		Space		Force
		Pneumatic	160 mm		250 mm		3000 N
Cleaning		Drive	Tape width			Control	
		-	138 mm			Optional	
Y- movement		Drive	Projection			Position	
		Linear motor	204 mm			Via display	
Cliché		Drive	Angle			Position	
		Pneumatic	Fix			In front fix, back with turning knob	
	Cups	56	70	86	120	140	160
	Max. size	8	6	5	4	3	-
	Max. size	520 x 300 x 10/0.5 mm					
	Cups	56	70	86	120	140	160
	Max. size	1	1	1	1	-	-
		800 x 130 x 0.5 mm					
	Part shuttle	Type	Drive	Adjustment		Stroke	
		VT 2 150	Pneumatic	Mech. Pos.		120-160 mm	
	Pad shuttle	Type	Drive	Adjustment		Stroke	
	Part shuttle	MFT 501/S	Linear motor	Display		± 200 mm	
			Type	Drive	Adjustment		Stroke
		VT x 680 s	Stepping motor	Display		680 mm	

Product ID	Type	Description
1 54 0 000	ML 500 BLPP	Stand-alone machine without pad cleaning, without accessories
1 54 0 001	ML 500 ALPP	Add-on version (part of a automation) without pad cleaning, without accessories, without control

2.9 Customer-Specific machines

If you cannot find a suitable machine among our standard pad printers, we can develop and manufacture customer-tailored printing machines.

Here is a small selection of customer-specific pad printing machines:

Selecta



This machine comes with special software which was developed to write texts. Small pads select the respective letters from the alphabet which is recessed into the cliché. Linear motors are used for XYZ positioning and the up and down pad movements. The cliché operates pneumatically. The base machine is equipped with Viscomat connections and pad cleaning.

LCN86L



The LCN86L is a fast-speed two-color pad printing machine. Each two-color print takes less than 2 seconds.

It is the first machine to use linear motors for all movements. All positions can be set using the touch screen. The X position is adjusted through position of the cliché, the Y position through the two-color pad shuttle.



Complete new development according to customer specification

This machine had to fit into a predefined space. With the help of a communication interface you can access any 6 images which are located in two different colors on the cliché. In addition, you can change jobs using the interface. With the help of a color sensor, the machine checks that the correct color was selected. A linear motor is used for positioning. Clichés and pad stroke operate pneumatically.

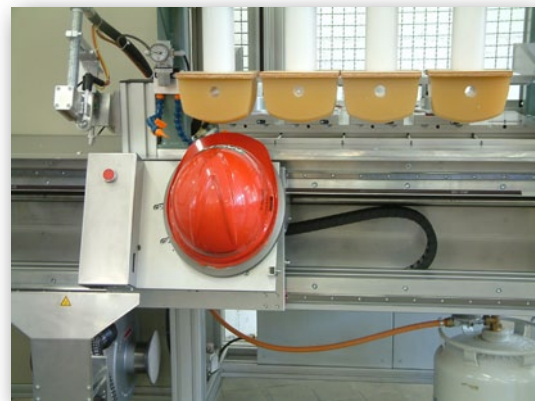
3 Pad printing systems

3.1 Portal systems

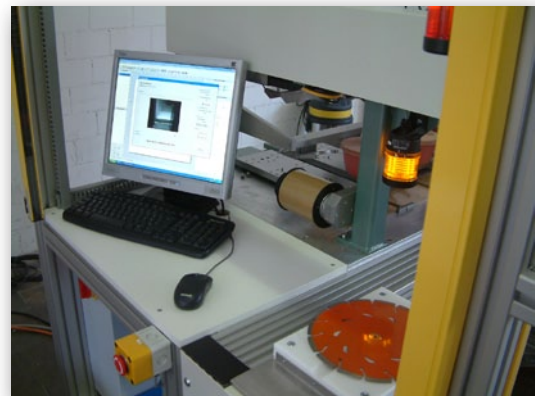
The Portal machine comes with a parts retainer which is positioned under the different working stations. It operates using a linear motor. You can integrate pre-treatment, drying, laser labeling and many other systems into the unit. As an option, the parts retainer can also be rotated enabling the most complex printing applications. XY positioning allows several images to be positioned under one cup. The working sequence can be programmed freely. Programming is intuitively and displayed graphically. Just like the ML line, our Portal machines are designed for complex prints. However, in contrast to the ML system, large-sized parts and pre- and post-treatment devices can be integrated more easily. Both lines are operated identically.



Portal machine for printing helmets



Portal machine with laser labeling



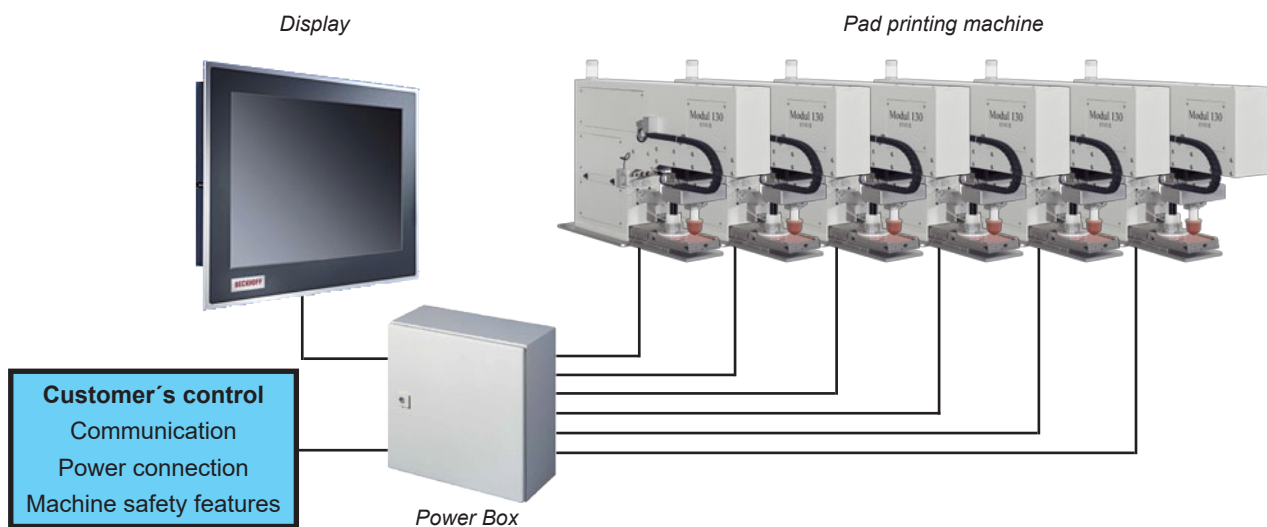
Portal machine for printing catheters



3.2 Network machines

Network machines are used by customers who want to build their own system and need several pad printing machines. A network machine comprises a display, a power box and several pad printers. The display can be used to set up all printers. Due to the fact that the control is centralized, a pad printing job can be saved and accessed at a later time. The pad printers are connected in a star shape around the power box. The power box includes the power supply, the machine safety features and distributes the signals.

The customer's control is connected over a network (CanOpen, Profibus or Ethernet) to the power box. This minimizes wiring and allows multiple connection options.



6 Modul 130 as network machine

3.3 Rotary indexing table systems

Rotary indexing tables are very common in automation processes. Although you need several parts retainer, in return you receive one part per print cycle. The operator can remove the object after it's been printed. He then can load the free parts retainer with a new unprinted object. Meanwhile the pad printing machine continues to print. All of our standard machines can be mounted to a rotary indexing table. And like all of our standard units, pretreatment and drying devices can be integrated directly. Loading and unloading is possible either manually by a light curtain or automatically.



Rotary indexing table with two Modul 200 machines and sequence programming



Rotary indexing table with MS 130 and MSS 130



Rotary indexing table with LCN 131



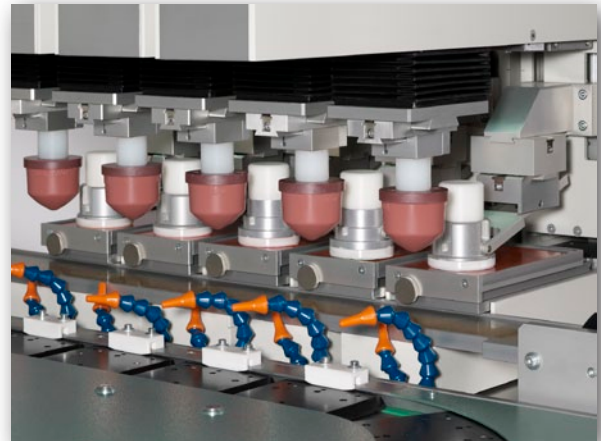
3.4 Transfer carre systems

The transfer carre technology allows the use of 4 to 10 print stations in the smallest of spaces. This solution is suited if you have many print designs and high number of pieces. Of course, pre- and post-treatment, rotating, loading and unloading stations can be integrated as well. All of our ML and MS machine and several Modul machines can be used as print stations.

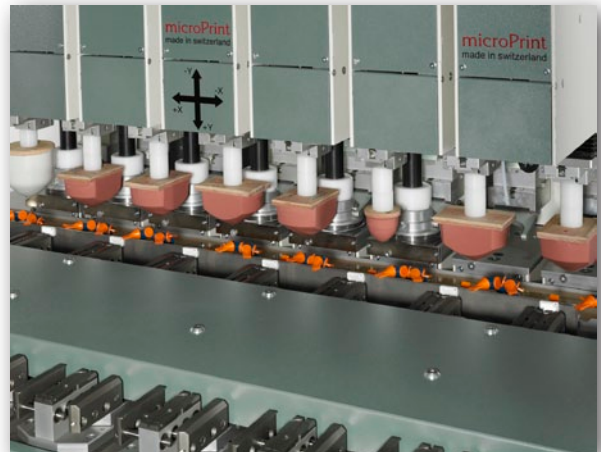
Modul machines allow printing in all Y and X direction via display - with a tolerance of 0.01mm. Up to 10 Modul machines and every Modul line machine can be mounted to a transfer carre.



Transfer carre with 5 Modul 100



Transfer carre with 8 Modul 110



Transfer carre with 4 Modul 200

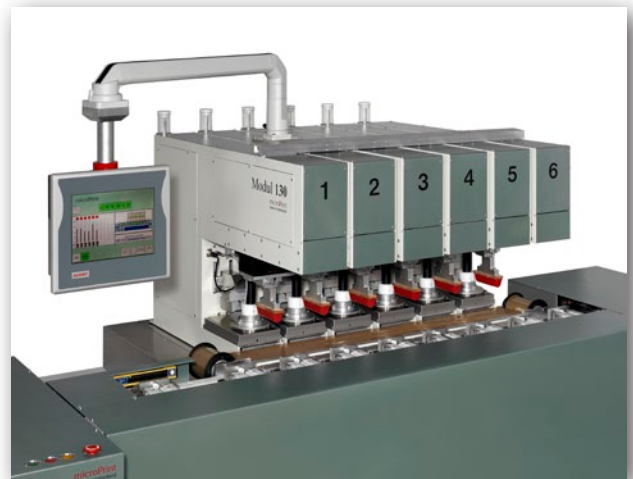


3.5 Transfer linear systems

The Transfer linear line is a transport system using plates. The plates are transported from one printing station to the next. At the end of the machine process, a lift moves the plates one level down from where they are transported back. At the beginning of the machining process, another lift moves the plates upwards. One advantage of this system is the easy access to the Modul machines. Moreover, the number of holders can be varied. One single holder is enough for trial runs and small orders. Additional plates can be added, depending on the desired speed. Pre- and post-treatment, rotating, loading and unloading stations can be installed as well.

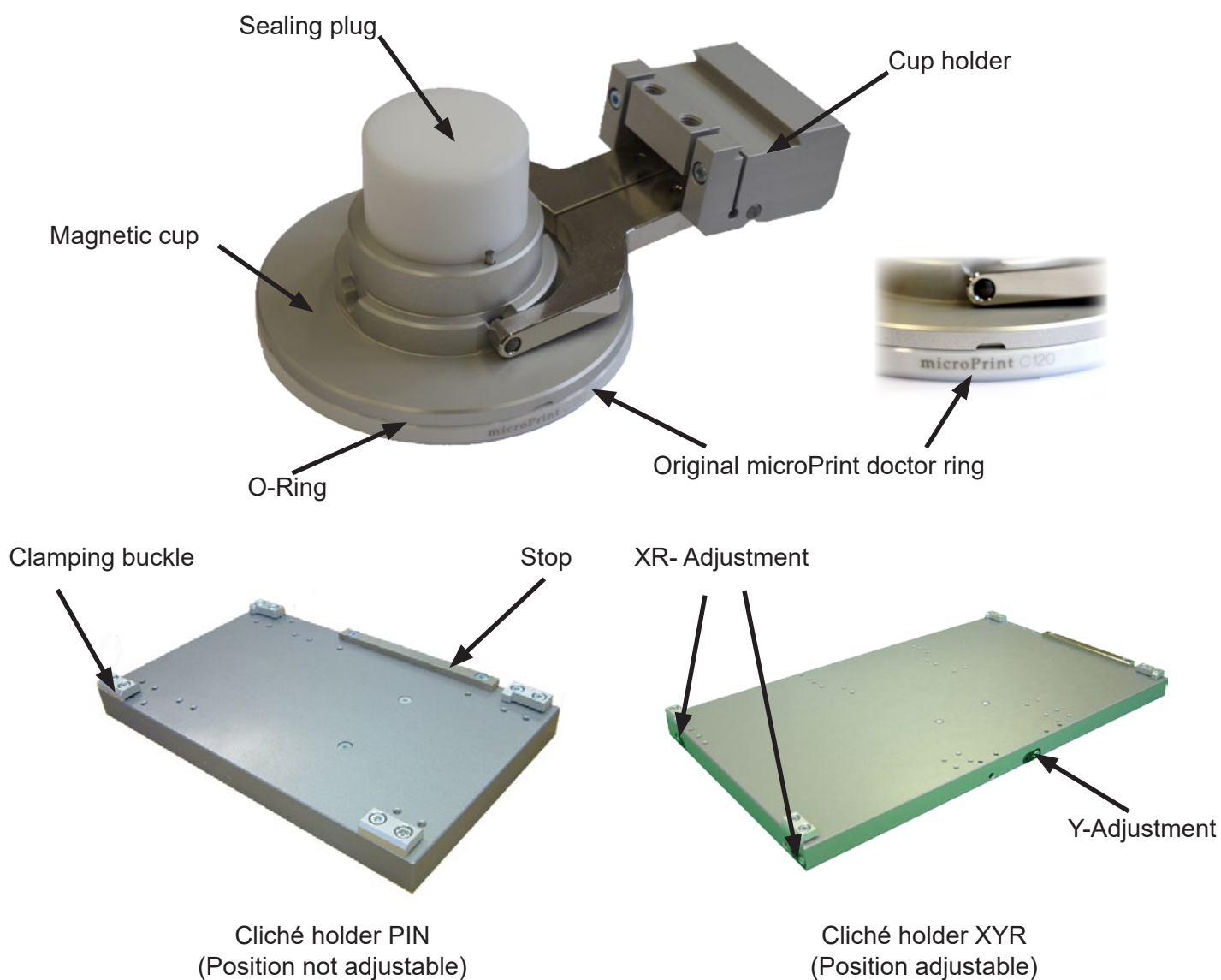
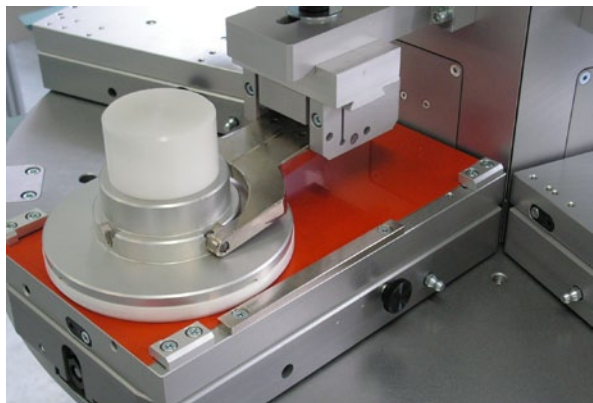


6 color system for round printing on ballpoint pens



4 Machine accessories

4.1 Closed inkwell

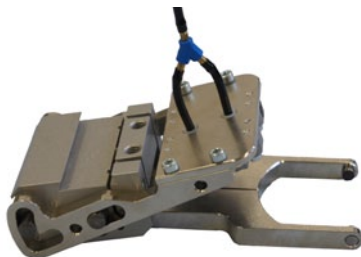


4.1.1 Cup holder

4.1.1.1 Standard cup holder



Standard



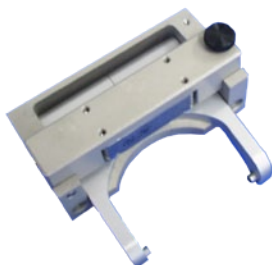
with device for pressure reinforcement

Product ID	Description	Type	Dimension
2 28 2 056	Standard cup holder for cups 56-70 for Smart, MS, ML, Modul, 5-Star and MSS 350	THS 56-70	150x65x45mm
2 28 2 156	Cup holder with pneumatic device for pressure reinforcement for cups 56-70 for Smart, MS, ML, Modul, 5-Star and MSS 350	THSP 56-70	165x80x45mm
2 28 2 086	Standard cup holder for cups 86-200 for Smart, MS, ML, Modul, 5-Star and MSS 350	THS 86-200	150x90x45mm
2 28 2 186	Cup holder with pneumatic device for pressure reinforcement for cups 86-200 for Smart, MS, ML, Modul, 5-Star and MSS 350	THSP 86-200	165x90x45mm
2 28 2 201	1 Connection for pneumatic device for pressure reinforcement	THSP 1A	
2 28 2 202	2 Connections for pneumatic device for pressure reinforcement	THSP 2A	
2 28 2 203	3 Connections for pneumatic device for pressure reinforcement	THSP 3A	

4.1.1.2 Cup holder LCN system



Without pressure reinforcement



With pressure reinforcement

Product ID	Description	Type	Dimension
2 28 1 456	Cup holder LCN for cups 56-70 for LCN 131 and MSS 130	THLC 56-70	
2 28 1 486	Cup holder LCN for cups 86-120 for LCN 131 and MSS 130	THLC 86-120	
2 28 1 586	Cup holder LCN with pressure reinforcement for cups 86-120 for LCN 131 and MSS 130	THLCP 86-120	
2 28 1 487	Cup holder LCN for cup 140 for LCN 151	THLC 140	
2 28 1 587	Cup holder LCN with pressure reinforcement for cup 140 for LCN 151	THLCP 140	

4.1.1.3 Pneumatic cup holder mount

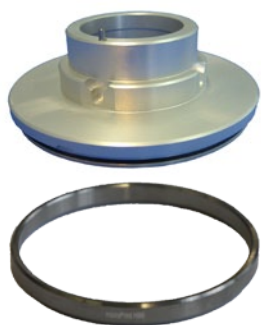
Pneumatic cup holder mounts are optional in the Modul lines and the ML 350. With the help of the touch screen this cup holder can be raised and lowered to change the cliché. In addition, the pneumatic cup holder mount can exert pressure on the cup. The force of the additional cup pressure can be adjusted over the display.



Product ID	Description	Type	Dimension
2 28 6 110	Pneumatic cup holder mount for Modul 110	THBP 110	
2 28 6 130	Pneumatic cup holder mount for Modul 130	THBP 130	
2 28 6 220	Pneumatic cup holder mount for Modul 220, cups 120-200	THBP 220	
2 28 6 350	Pneumatic cup holder mount for ML 350	THBP ML350	
2 28 3 056	Spring-mounted cup holder for cups 56-70 for Modul with pneumatic cup holder mount	THP 56-70	
2 28 3 086	Spring-mounted cup holder for cups 86-200 for Modul with pneumatic cup holder mount	THP 86-200	

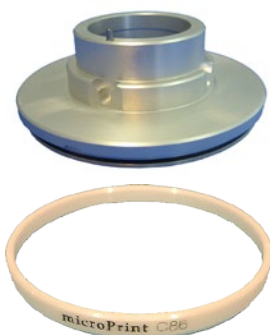
4.1.2 Cups

4.1.2.1 Cup-Set with hard metal ring



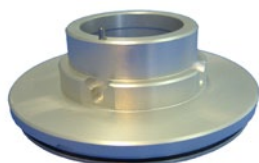
Product ID	Description	Type	Dimension
2 31 1 056	Cup-Set (MT 56 and H 56)	HA 56	D = 56 mm
2 31 1 070	Cup-Set (MT 70 and H 70)	HA 70	D = 70 mm
2 31 1 086	Cup-Set (MT 86 and H 86)	HA 86	D = 86 mm
2 31 1 120	Cup-Set (MT 120 and H 120)	HA 120	D = 120 mm
2 31 1 140	Cup-Set (MT 140 and H 140)	HA 140	D = 140 mm
2 31 1 160	Cup-Set (MT 160 and H 160)	HA 160	D = 160 mm
2 31 1 180	Cup-Set (MT 180 and H 180)	HA 180	D = 180 mm
2 31 1 200	Cup-Set (MT 200 and H 200)	HA 200	D = 200 mm

4.1.2.2 Cup-Set with ceramic ring



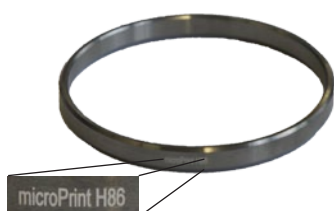
Product ID	Description	Type	Dimension
2 31 3 056	Cup-Set (MT 56 and C 56)	CA 56	D = 56 mm
2 31 3 070	Cup-Set (MT 70 and C 70)	CA 70	D = 70 mm
2 31 3 086	Cup-Set (MT 86 and C 86)	CA 86	D = 86 mm
2 31 3 120	Cup-Set (MT 120 and C 120)	CA 120	D = 120 mm
2 31 3 140	Cup-Set (MT 140 and C 140)	CA 140	D = 140 mm
2 31 3 160	Cup-Set (MT 160 and C 160)	CA 160	D = 160 mm
2 31 3 180	Cup-Set (MT 180 and C 180)	CA 180	D = 180 mm
2 31 3 200	Cup-Set (MT 200 and C 200)	CA 200	D = 200 mm

4.1.2.3 Magnetic cup with O-ring



Product ID	Description	Type	Dimension
2 31 0 056	Magnetic cup with O-ring for rings 56	MT 56	D = 56 mm
2 31 0 070	Magnetic cup with O-ring for rings 70	MT 70	D = 70 mm
2 31 0 086	Magnetic cup with O-ring for rings 86	MT 86	D = 86 mm
2 31 0 120	Magnetic cup with O-ring for rings 120	MT 120	D = 120 mm
2 31 0 140	Magnetic cup with O-ring for rings 140	MT 140	D = 140 mm
2 31 0 160	Magnetic cup with O-ring for rings 160	MT 160	D = 160 mm
2 31 0 180	Magnetic cup with O-ring for rings 180	MT 180	D = 180 mm
2 31 0 200	Magnetic cup with O-ring for rings 200	MT 200	D = 200 mm

4.1.2.4 Hard metal doctor ring



Only original rings are labeled with **microPrint**

Product ID	Description	Type	Dimension
2 31 2 056	Hard metal ring 56	H 56	D = 56 mm
2 31 2 070	Hard metal ring 70	H 70	D = 70 mm
2 31 2 086	Hard metal ring 86	H 86	D = 86 mm
2 31 2 120	Hard metal ring 120	H 120	D = 120 mm
2 31 2 140	Hard metal ring 140	H 140	D = 140 mm
2 31 2 160	Hard metal ring 160	H 160	D = 160 mm
2 31 2 180	Hard metal ring 180	H 180	D = 180 mm
2 31 2 200	Hard metal ring 200	H 200	D = 200 mm

4.1.2.5 Ceramic doctor ring



Only original rings are labeled with **microPrint**

Product ID	Description	Type	Dimension
2 31 4 056	Ceramic ring 56	C 56	D = 56 mm
2 31 4 070	Ceramic ring 70	C 70	D = 70 mm
2 31 4 086	Ceramic ring 86	C 86	D = 86 mm
2 31 4 120	Ceramic ring 120	C 120	D = 120 mm
2 31 4 140	Ceramic ring 140	C 140	D = 140 mm
2 31 4 160	Ceramic ring 160	C 160	D = 160 mm
2 31 4 180	Ceramic ring 180	C 180	D = 180 mm
2 31 4 200	Ceramic ring 200	C 200	D = 200 mm

4.1.2.6 O-Rings



Product ID	Description	Type	Dimension
2 30 9 056	O-ring 56	OR 56	D = 56 mm
2 30 9 070	O-ring 70	OR 70	D = 70 mm
2 30 9 086	O-ring 86	OR 86	D = 86 mm
2 30 9 120	O-ring 120	OR 120	D = 120 mm
2 30 9 140	O-ring 140	OR 140	D = 140 mm
2 30 9 160	O-ring 160	OR 160	D = 160 mm
2 30 9 180	O-ring 180/200	OR 180	D = 180/200 mm

4.1.2.7 Sealing plugs



Product ID	Description	Type	Dimension
2 30 2 056	Sealing plug for cups 56-70	VZ 56-70	
2 30 2 086	Sealing plug for cups 86-200	VZ 86-200	

4.1.2.8 Lap or regrind doctor rings

Product ID	Description	Type	Dimension
2 23 0 360	Lap hard metal- or ceramic doctor rings	Lapping	
2 23 0 361	Regrind hard metal doctor rings	Grinding	

4.1.2.9 Kit for lapping (for doctor rings)



Product ID	Description	Type	Dimension
2 23 0 340	Kit for lapping	LK	Ø 348 mm
2 23 0 350	Diamond compound application stick; 3µ	LKP	10g
2 23 0 352	Lubricating fluid	LKS	450 ml

Kit for lapping contains:

- 1 Plate with concentric grooving; Ø 348 mm
- 1 Diamond compound application stick; 3µ / 10 mg
- 1 Lubricating fluid; 450 ml
- 1 Case with operating instructions

4.1.3 Cliché holder

4.1.3.1 Cliché holder PIN for cliché with thickness 0.5mm

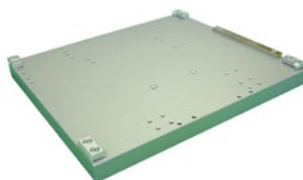
- Cliché holder not adjustable
- For plastic clichés and thin steel clichés



2 20 5 013



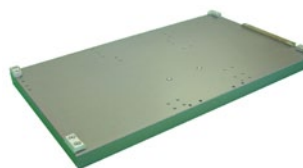
2 20 5 015



2 21 0 260



2 21 0 400



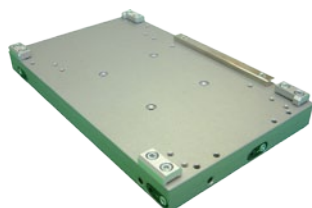
2 21 0 500

Product ID	Description	Type	For cliché width x length
2 21 6 008	Cliché holder	PIN 05 100x200	100x200
2 20 5 013	Cliché holder	PIN 05 130x250	100x200 / 100x250 / 130x230 / 130x250
2 20 5 015	Cliché holder	PIN 05 150x300	150x300
2 21 0 222	Cliché holder	PIN 05 170x330	170x330
2 21 3 302	Cliché holder	PIN 05 180x350	130x250 / 150x300 / 180x350
2 21 0 220	Cliché holder	PIN 05 220x420	150x300 / 180x360 / 200x380 / 220x420
2 21 0 260	Cliché holder	PIN 05 260x250	100x200 / 130x230 / 130x250 / 260x200 / 260x230 / 260x250
2 21 0 360	Cliché holder	PIN 05 360x250	100x200 / 130x230 / 130x250 / 360x200 / 360x230 / 360x250
2 21 0 400	Cliché holder	PIN 05 400x250	100x200 / 130x230 / 130x250 / 400x200 / 400x230 / 400x250
2 21 0 500	Cliché holder	PIN 05 500x250	100x200 / 130x230 / 130x250 / 500x200 / 500x230 / 500x250
2 21 0 520	Cliché holder	PIN 05 520x300	520x250 / 520x300

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
2 21 6 008														x				
2 20 5 013	x	x				x	x	x	x		x	x	x		x	x		
2 20 5 015					x							x	x			x	x	
2 21 0 222													x			x	x	
2 21 3 302																	x	
2 21 0 220																	x	
2 21 0 260		x					x	x	x		x	x	x					
2 21 0 360								x	x		x	x	x					
2 21 0 400								x	x		x	x	x					
2 21 0 500									x				x					
2 21 0 520									x				x					

4.1.3.2 Cliché holder XYR for cliché with thickness 0.5mm

- Cliché holder adjustable; lateral forward / backward and angle
- For plastic clichés and thin steel clichés



2 20 7 010



2 21 3 014



2 20 7 014



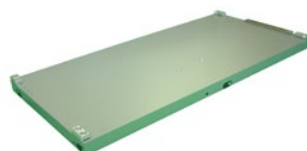
2 21 3 015



2 21 3 310



2 21 2 400



2 21 2 500

Product ID	Description	Type	For cliché width x length
2 20 7 010	Cliché holder	XYR 05 100x200	100x200
2 20 7 013	Cliché holder	XYR 05 130x230	100x200 / 130x230
2 21 3 014	Cliché holder right *	XYR 05 130x230 R	100x200 / 130x230
2 20 7 014	Cliché holder	XYR 05 130x250	100x200 / 130x230 / 130x250
2 21 3 015	Cliché holder right *	XYR 05 130x250 R	100x200 / 130x230 / 130x250
2 20 7 015	Cliché holder	XYR 05 150x300	150x300
2 20 7 016	Cliché holder right *	XYR 05 150x300 R	150x300
2 20 3 305	Cliché holder	XYR 05 170x330	170x330
2 20 3 307	Cliché holder right *	XYR 05 170x330 R	170x330
2 21 3 310	Cliché holder	XYR 05 180x360	120x360 / 160x360 / 180x360
2 21 2 220	Cliché holder	XYR 05 220x420	150x300 / 180x360 / 200x380 / 220x420
2 21 2 260	Cliché holder	XYR 05 260x250	100x200 / 130x200 / 130x250 / 260x250
2 21 2 400	Cliché holder	XYR 05 400x250	100x200 / 130x230 / 130x250 / 400x200 / 400x230 / 400x250
2 21 2 440	Cliché holder	XYR 05 440x250	100x200 / 130x230 / 130x250 / 440x200 / 440x230 / 440x250
2 21 2 500	Cliché holder	XYR 05 500x250	500x200 / 500x230 / 500x250
2 21 3 500	Cliché holder	XYR 05 520x300	520x300

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 130 spiegelverkehrt	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
2 20 7 010															x				
2 20 7 013			x							x						x			
2 21 3 014											x*								
2 20 7 014	x	x				x	x	x	x			x	x	x		x	x		x
2 21 3 015		x*					x*	x*				x*	x*						
2 20 7 015					x								x	x			x	x	
2 20 7 016													x*	x*					
2 21 3 305														x			x	x	
2 21 3 307														x*					
2 21 3 310																		x	
2 21 2 220																		x	
2 21 2 260		x					x	x	x			x	x	x					
2 21 2 400								x	x			x	x	x					
2 21 2 440								x	x			x	x	x					
2 21 2 500									x					x					
2 21 3 500									x					x					

* Special cliché slide required

4.1.3.3 Cliché holder PIN for cliché with thickness 10 mm

- Cliché holder not adjustable
- For thick steel clichés

Product ID	Description	Type	For cliché width x length
2 20 6 010	Cliché holder	PIN 10 100x200	100x200
2 20 6 014	Cliché holder	PIN 10 130x250	130x250
2 20 6 015	Cliché holder	PIN 10 150x300	150x300
2 21 3 303	Cliché holder	PIN 10 180x350	180x350

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
2 20 6 010														x				
2 20 6 014	x	x				x	x	x	x		x	x	x		x	xx		
2 20 6 015					x							x	x			x	x	
2 21 3 303																	x	

4.1.3.4 Cliché holder XYR for cliché with thickness 10 mm

- Cliché holder adjustable; lateral forward/backward and angle
- For thick steel clichés



2 20 4 013



2 21 3 013



2 20 4 014



2 21 3 016



2 20 4 020

Product ID	Description	Type	For cliché width x length
2 20 4 010	Cliché holder left	XYR 10 100x200 L	100x200
2 20 4 013	Cliché holder	XYR 10 130x230	130x230
2 21 3 013	Cliché holder right *	XYR 10 130x230 R	130x230
2 20 4 014	Cliché holder	XYR 10 130x250	130x250
2 21 3 016	Cliché holder right *	XYR 10 130x250 R	130x250
2 20 4 015	Cliché holder	XYR 10 150x300	150x250 / 150x300
2 21 3 030	Cliché holder	XYR 10 170x330	170x330
2 21 3 311	Cliché holder	XYR 10 180x360	180x360
2 21 3 315	Cliché holder	XYR 10 220x420	200x380 / 220x420
2 20 4 020	Cliché holder	XYR 10 200x250	200x250
2 20 4 026	Cliché holder	XYR 10 260x250	260x250
2 21 3 304	Cliché holder	XYR 10 300x250	300x250

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 130 spiegelver- kehrt	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
2 20 4 010															x				
2 20 4 013			x							x						x			
2 21 3 013											x*								
2 20 4 014	x	x				x	x	x	x			x	x	x		x	x		x
2 21 3 016		x*					x*	x*				x*	x*						
2 20 4 015					x								x	x			x	x	
2 21 3 030														x			x	x	
2 21 3 311																		x	
2 21 3 315																		x	
2 20 4 020				x															
2 20 4 026		x					x	x	x			x	x	x					
2 21 3 304								x	x			x	x	x					

* Special cliché slide required

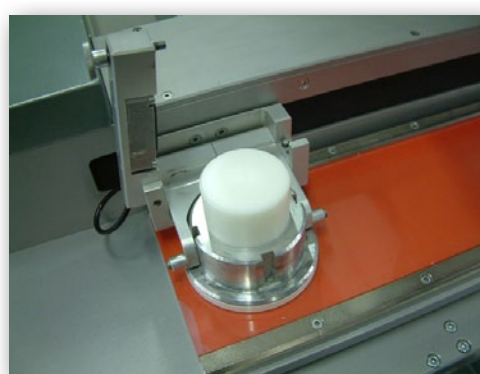
4.1.3.5 Reduction rails



2 20 8 213

Product ID	Description	Type	Quantity
2 20 8 213	Reduction rails for 100 mm wide cliché	RS 100	2 pieces

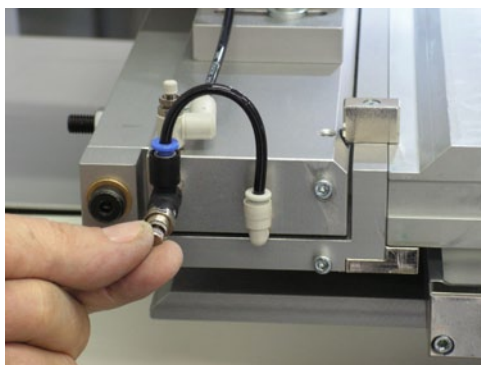
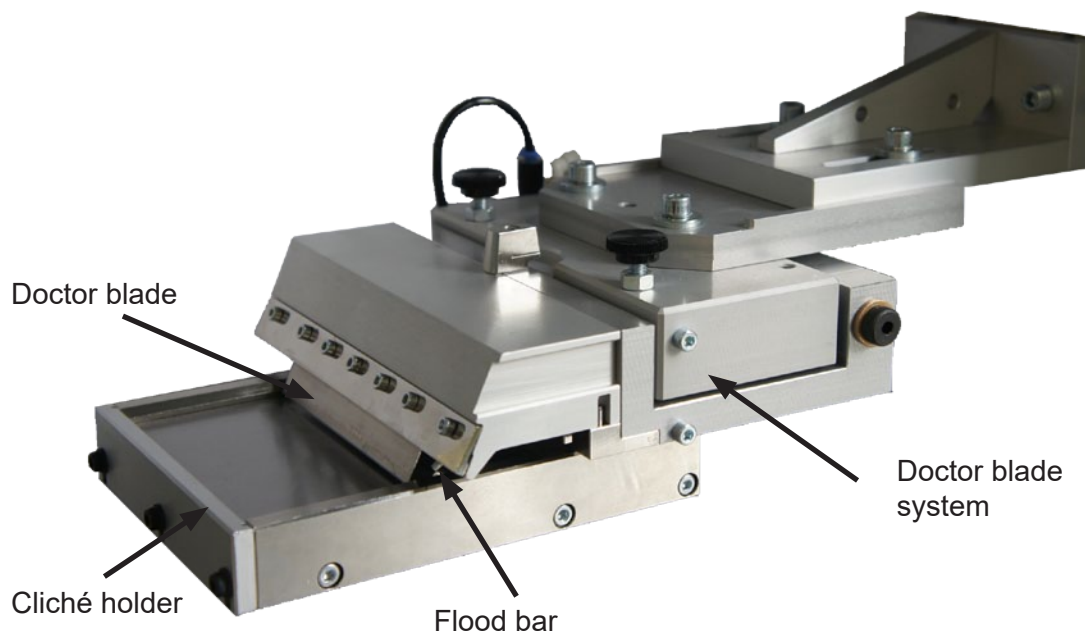
4.2 Transverse doctoring unit



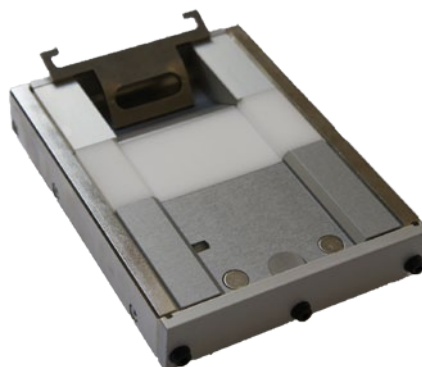
2 62 3 500

Product ID	Description	Type	Dimension
2 62 3 250	Transverse doctoring unit 250 for MS 250 for cups ø 56, ø 70	QR 250/56	430x100x0.5mm
2 62 3 251	Transverse doctoring unit 250 for MS 250 for cup ø 86	QR 250/86	430x100x0.5mm
2 62 3 350	Transverse doctoring unit 350 for MS 350 and ML 350	QR 350	600x130x0.5mm
2 62 3 500	Transverse doctoring unit 500 for MS 500 and ML 500	QR 500	800x130x0.5mm

4.3 Open inkwell



Doctor blade system with knife pressure adjustable

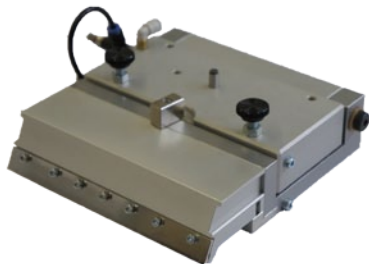


Cliché holder with inserts



Two color cliché holder

4.3.1 Doctor blade system



Product ID	Description	Type	Dimension
2 82 0 150	Doctor blade system 150 for Smart 130 or MS 130 Flood bar: 1 x OR60, 1 x OR80, 1 x OR100, 1 x OR100/2, 1 x OR130, 1 x OR150	ORS 150	
2 82 0 250	Doctor blade system 250 for Smart 250 or MS 250 Flood bar : 1 x OR60, 1 x OR80, 1 x OR100, 1 x OR100/2, 2 x OR120, 1 x OR130, 1 x OR150, 1 x OR250	ORS 250	

4.3.2 Flood bar



2 82 9 060



2 82 9 080



2 82 9 101



2 82 9 102



2 82 9 120



2 82 9 130



2 82 9 150



2 82 9 250

Product ID	Description	Type	Length of blade
2 82 9 060	Flood bar 60	OR 60	42mm
2 82 9 080	Flood bar 80	OR 80	62mm
2 82 9 101	Flood bar 100	OR 100	82mm
2 82 9 102	Flood bar 100 / 2 color	OR 100/2	2x30mm
2 82 9 120	Flood bar 120	OR 120	102mm
2 82 9 130	Flood bar 130	OR 130	112mm
2 82 9 150	Flood bar 150	OR 150	132mm
2 82 9 250	Flood bar 250	OR 250	280mm

4.3.3 Doctor blade

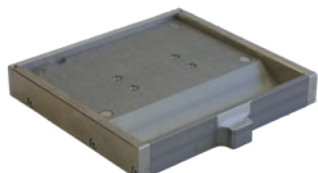


Product ID	Description	Type	Dimension
2 82 8 050	Doctor blade 50 / 5 pieces	ORM 50	46x19x0.25 mm
2 82 8 060	Doctor blade 60 / 5 pieces	ORM 60	56x19x0.25 mm
2 82 8 080	Doctor blade 80 / 5 pieces.	ORM 80	76x19x0.25 mm
2 82 8 100	Doctor blade 100 / 5 pieces	ORM 100	96x19x0.25 mm
2 82 8 120	Doctor blade 120 / 5 pieces	ORM 120	116x19x0.25 mm
2 82 8 130	Doctor blade 130 / 5 pieces	ORM 130	126x19x0.25 mm
2 82 8 150	Doctor blade 150 / 5 pieces	ORM 150	146x19x0.25 mm
2 82 8 200	Doctor blade 200 / 5 pieces	ORM 200	196x19x0.25 mm
2 82 8 250	Doctor blade 250 / 5 pieces	ORM 250	246x19x0.25 mm

4.3.4 Cliché holder



2 82 1 100



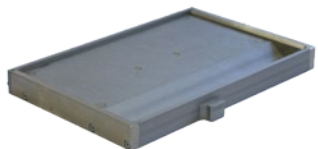
2 82 1 150



2 82 1 200



2 82 1 250



2 82 2 250

Product ID	Description	Type	For cliché width x length x height
2 82 1 100	Cliché holder	ORK 05 100x100	100x100x0.5mm
2 82 1 150	Cliché holder	ORK 05 100x150	100x150x0.5mm
2 82 1 200	Cliché holder	ORK 05 100x200	100x200x0.5mm
2 82 1 250	Cliché holder	ORK 05 100x250	100x250x0.5mm
2 82 2 250	Cliché holder	ORK 05 120x250	120x250x0.5mm

4.3.5 Cliché holder with inserts



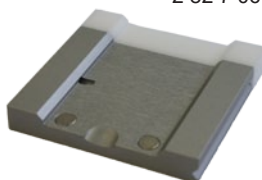
2 82 3 100



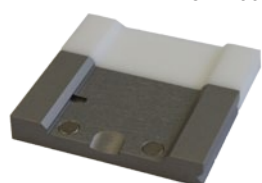
2 82 7 100



2 82 7 060



2 82 7 066



2 82 7 068



2 82 7 920

Product ID	Description	Type	For cliché width x length x height
2 82 3 100	Cliché holder	ORK 10 100x100	100 x 100 x 10mm
2 82 7 100	Insert for ORK 10 100x100	ORE 05 100x100	100 x 100 x 0.5mm
2 82 7 060	Insert for ORK 10 100x100	ORE 05 60x100	60 x 100 x 0.5mm
2 82 7 066	Insert for ORK 10 100x100	ORE 05 60x80	60 x 80 x 0.5mm
2 82 7 068	Insert for ORK 10 100x100	ORE 05 60x60	60 x 60 x 0.5mm
2 82 7 920	Ink tub insert for ORK 10 100x100	ORE 20	20mm

4.3.6 Color separator



2 82 9 000 and 2 82 9 010

Product ID	Description	Type	Dimension
2 82 9 000	Color separator for cliché / Cliché depth 100 mm	ORF 100	
2 82 9 001	Color separator for cliché / Cliché depth 120 mm	ORF 120	
2 82 9 010	Color separator for ink tub	ORF	

4.4 Pad cleaning

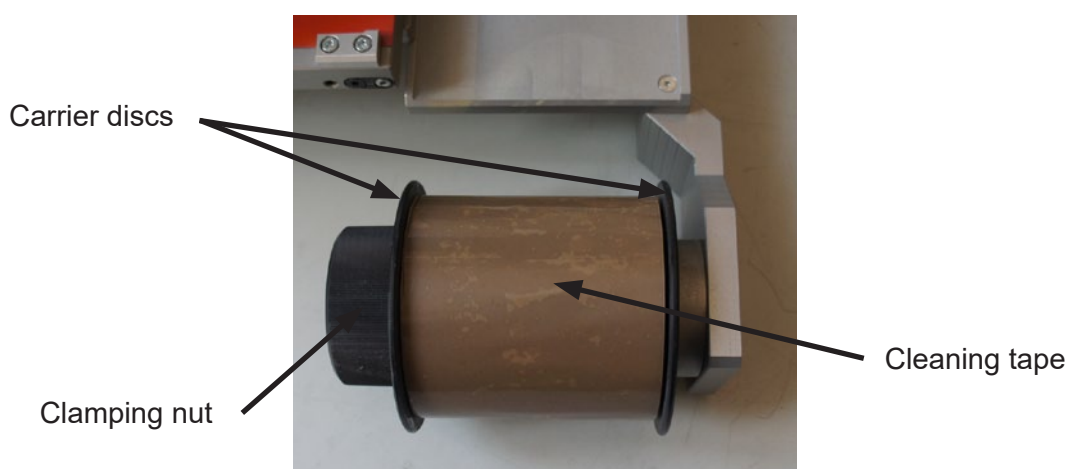
Pads may become soiled with ink, with dirt from the part to be printed or by attracting dust particles from the air. Therefore a pad must be cleaned from time to time. By using an automatic pad cleaning you no longer have to stop the machine. Pad cleaners used in big systems guarantee less rejects.



Tape unwinder



Tape rewinder



4.4.1 Pad cleaning



Product ID	Description	Type	Dimension
2 01 0 214	Pad cleaning for MS 130/250	TR MS250	115mm
2 01 0 216	Pad cleaning for MS 350	TR MS350	115mm
2 01 0 218	Pad cleaning for MS 500 and ML 500	TR MS500	138mm
2 01 0 217	Pad cleaning for ML 350	TR ML350	138mm
2 01 0 222	Pad cleaning for 5-Star right (2. Pad cleaning for shuttle operated)	TR 5Star	138mm
2 01 0 225	Pad cleaning for Modul 110	TR Modul110	100mm
2 01 0 226	Pad cleaning for Modul 130	TR Modul130	115mm
2 01 0 229	Pad cleaning for Modul 220	TR Modul220	194mm

4.4.2 Cleaning tape control



Product ID	Description	Type	Dimension
2 01 0 240	Tape control for LCN 131, MS 130/250/350, MSS 130/350, Modul 110/130	TC 115	
2 01 0 241	Tape control for LCN 133/151, MS 500, ML 350/500, 5-Star	TC 138	
2 01 0 242	Tape control for Modul 220	TC 194	

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
2 01 0 240			x			x	x	x		x	x			x	x			
2 01 0 241				x	x				x			x	x			x		x
2 01 0 242																	x	

4.4.3 Cleaning tape reduction

This reduction allows working with narrower cleaning tapes.



Product ID	Description	Type	Dimension
2 36 0 008	Cleaning tape reduction	RBR 8	Width 8mm, 4 pcs.
2 36 0 020	Cleaning tape reduction	RBR 20	Width 20mm, 4 pcs.
2 36 0 032	Cleaning tape reduction	RBR 32	Width 32mm, 4 pcs.

Largeness normal	Largeness reduced	Reduction
115mm	100mm	RBR 8
115mm	50mm	RBR 32
138mm	100mm	RBR 20
194mm	138mm	RBR 32

4.4.4 Cleaning tape



Product ID	Description	Type	Dimension
2 36 2 050	Cleaning tape	RB 50	50 mm
2 36 2 100	Cleaning tape	RB 100	100 mm
2 36 2 115	Cleaning tape	RB 115	115 mm
2 36 2 138	Cleaning tape	RB 138	138 mm
2 36 2 194	Cleaning tape	RB 194	194 mm

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
50 mm																		
100 mm														x				
115 mm	x	x	x			x	x	x		x	x				x			
138 mm					x				x			x	x			x		x
194 mm				x													x	

4.4.5 Reel empty



Product ID	Description	Type	Dimension
2 36 1 050	Reel empty	LR 50	50 mm
2 36 1 100	Reel empty	LR 100	100 mm
2 36 1 115	Reel empty	LR 115	115 mm
2 36 1 138	Reel empty	LR 138	138 mm
2 36 1 194	Reel empty	LR 194	194 mm

4.4.6 Spare parts



2 36 3 001



2 36 3 010



2 01 0 260

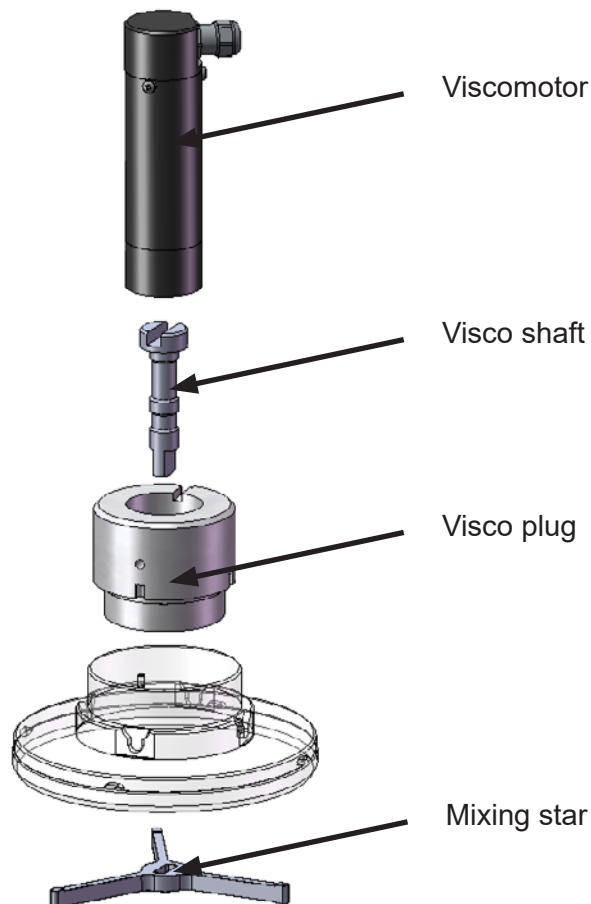
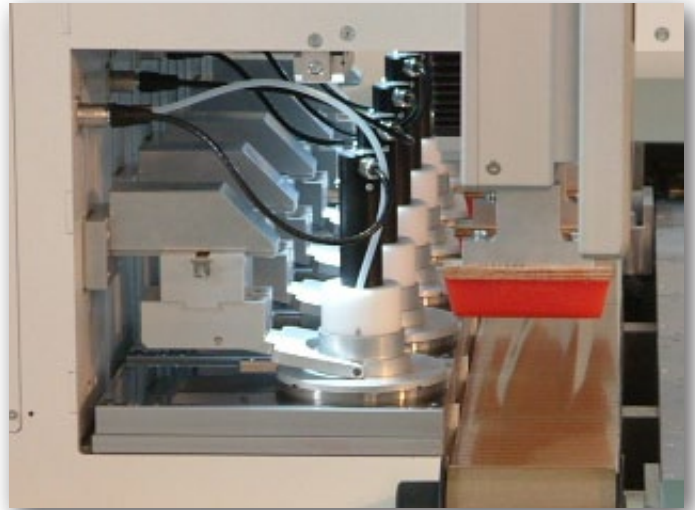


2 36 3 194 , 138, 115

Product ID	Description	Type	Dimension
2 36 3 001	Carrier disc	MNS	
2 36 3 010	Clamping nut	SPM	
2 01 0 260	Cleaning tape motor	TR MOT	
2 36 3 115	Carrier 115	MN 115	
2 36 3 138	Carrier 138	MN 138	
2 36 3 194	Carrier 194	MN 194	

4.5 Viscomat and Thinner

The viscosity of the ink is extremely important for the print. With an open system you have to stop the printing process every 30 to 40 minutes to dilute the ink. With a closed system this interval is much longer, but even here the thinner evaporates through the movement of the cup on the cliché. The Viscomat measures the viscosity of the ink in the cup and adds automatically thinner to the ink as needed. By doing so the color's viscosity is kept stable and print errors can be prevented.



4.5.1 Thinner and Viscomat connectors



Thinner container



Thinner valve



Thinner connectors and Viscomat connector

Product ID	Description	Type	Dimension
2 00 0 011	Thinning system 1-fold LCN 131/151	VS LC 1	
2 00 0 012	Thinning system 2-fold LCN 133	VS LC 2	
2 00 0 013	Thinning system 3-fold LCN 133	VS LC 3	
2 00 0 031	Thinning system 1-fold MS	VS MS 1	
2 00 0 032	Thinning system 2-fold MS	VS MS 2	
2 00 0 033	Thinning system 3-fold MS	VS MS 3	
2 00 0 034	Thinning system 4-fold MS	VS MS 4	
2 00 0 071	Thinning system 1-fold ML	VS ML 1	
2 00 0 072	Thinning system 2-fold ML	VS ML 2	
2 00 0 073	Thinning system 3-fold ML	VS ML 3	
2 00 0 074	Thinning system 4-fold ML	VS ML 4	
2 00 0 075	Thinning system 5-fold ML	VS ML 5	
2 00 0 081	Thinning system 1-fold Modul 110	VSM110 1	
2 00 0 082	Thinning system 1-fold Modul 130	VSM130 1	
2 00 0 083	Thinning system 1-fold Modul 220	VSM220 1	
2 00 0 050	Thinning system 5-fold 5-Star	VS 5S 5	

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
2 00 0 011			x		x													
2 00 0 012				x														
2 00 0 013				x														
2 00 0 031						x	x	x	x	x	x							
2 00 0 032							x	x	x		x							
2 00 0 033							x	x	x		x							
2 00 0 034							x	x	x		x							
2 00 0 071												x	x					
2 00 0 072												x	x					
2 00 0 073												x	x					
2 00 0 074												x	x					
2 00 0 075												x	x					
2 00 0 081														x				
2 00 0 082															x			
2 00 0 083																x	x	
2 00 0 050																		x

4.5.2 Viscomat set (Visco shaft with magnet, mixing star with steel core)



Viscomotor VTM



Visco plug VZV



Visco shaft AWM



Mixing star MCM



Visco tube SV

Product ID	Description	Type	Includes
2 00 2 070	Viscomat set for cups 70	VTSm 70	VTM 86, VZV 70, AWM 70-200, MCM 70, SV
2 00 2 086	Viscomat set for cups 86	VTSm 86	VTM 86, VZV 86-200, AWM 70-200, MCM 86, SV
2 00 2 120	Viscomat set for cups 120	VTSm 120	VTM 120, VZV 86-200, AWM 70-200, MCM 120, SV
2 00 2 140	Viscomat set for cups 140	VTSm 140	VTM 120, VZV 86-200, AWM 70-200, MCM 140, SV
2 00 2 160	Viscomat set for cups 160	VTSm 160	VTM 120, VZV 86-200, AWM 70-200, MCM 160, SV
2 00 2 180	Viscomat set for cups 180	VTSm 180	VTM 180, VZV 86-200, AWM 70-200, MCM 180, SV
2 00 2 200	Viscomat set for cups 200	VTSm 200	VTM 180, VZV 86-200, AWM 70-200, MCM 200, SV

4.5.3 Viscomotor



Product ID	Description	Type	Reduction
2 32 0 086	Viscomotor for cups 70 and 86	VTM 86	17.2:1
2 32 0 120	Viscomotor for cups 120, 140 and 160	VTM 120	25:1
2 32 0 180	Viscomotor for cups 180 and 200	VTM 180	51:1

4.5.4 Visco plug



Product ID	Description	Type	Dimension
2 32 1 070	Visco plug for cup 70	VZV 70	
2 32 1 086	Visco plug for cups 86-200	VZV 86-200	

4.5.5 Visco shaft



2 32 2 090



2 32 2 091

Product ID	Description	Type	Dimension
2 32 2 090	Visco shaft 70-200 without magnet	AW 70-200	
2 32 2 091	Visco shaft 70-200 with magnet	AWM 70-200	

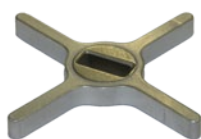
4.5.6 Mixing star

4.5.6.1 Mixing star without steel core



Product ID	Description	Type	Dimension
2 32 6 070	Mixing star for cups 70	MC 70	
2 32 6 086	Mixing star for cups 86	MC 86	
2 32 6 120	Mixing star for cups 120	MC 120	
2 32 6 140	Mixing star for cups 140	MC 140	

4.5.6.2 Mixing star with steel core



2 32 8 070 - 2 32 8 120



2 32 8 140 - 2 32 8 200

Product ID	Description	Type	Dimension
2 32 8 070	Mixing star for cups 70	MCM 70	
2 32 8 086	Mixing star for cups 86	MCM 86	
2 32 8 120	Mixing star for cups 120	MCM 120	
2 32 8 140	Mixing star for cups 140	MCM 140	
2 32 8 160	Mixing star for cups 160	MCM 160	
2 32 8 180	Mixing star for cups 180	MCM 180	
2 32 8 200	Mixing star for cups 200	MCM 200	

4.5.7 Visco tube



2 32 5 010



2 32 5 011

Product ID	Description	Type	Dimension
2 32 5 010	Visco tube (tube and connector)	SV	L = 300 mm
2 32 5 011	Visco tube, FEP-tube ø4/1	SVN	L = 300 mm

4.5.8 External Viscomat



Product ID	Description	Type	Dimension
2 00 0 060	External Viscomat 1-fold	EXV1	

4.5.9 Viscomat fastener



2 32 7 000



2 32 7 010

Product ID	Description	Type	Dimension
2 32 7 000	Viscomat fastener horizontal 1-fold	VHL1	for 1 Viscomat
2 32 7 010	Viscomat fastener vertical 1-fold	VHS1	for 1 Viscomat
2 32 7 011	Viscomat fastener vertical 2-fold	VHS2	for 2 Viscomats
2 32 7 012	Viscomat fastener vertical 3-fold	VHS3	for 3 Viscomats
2 32 7 013	Viscomat fastener vertical 4-fold	VHS4	for 4 Viscomats

4.5.10 Spare parts



2 00 0 101

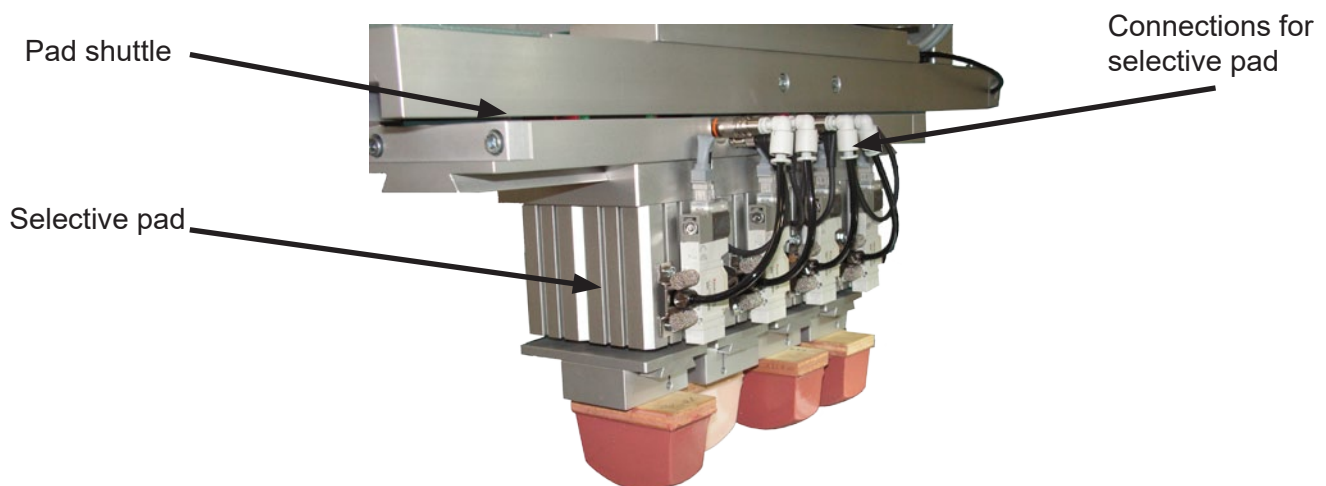
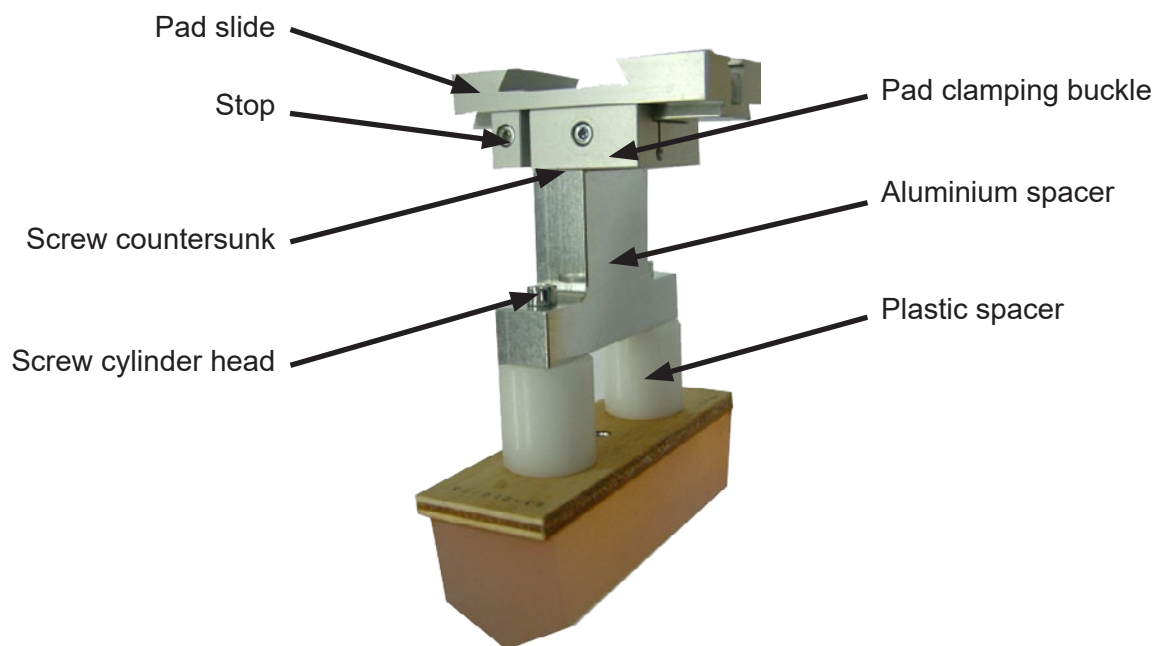
2 00 0 102



2 00 0 110

Product ID	Description	Type	Dimension
2 00 0 101	Thinner container complete LCN/MS/MSS/ML/Modul	VB	
2 00 0 102	Thinner container complete 5-Star	VB 5S	
2 00 0 110	Thinner valve	VV	

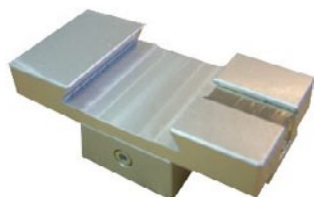
4.6 Pad positioning



4.6.1 Pad holder

		Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
Pad holder set	2 34 3 210	x	x	x			x	x	x		x	x	x		x	x	x	x	x
	2 34 3 211	x	x	x			x	x	x		x	x	x		x	x	x	x	x
	2 34 3 212	x	x	x			x	x	x		x	x	x		x	x	x	x	x
	2 34 3 213	x	x	x			x	x	x		x	x	x		x	x	x	x	x
	2 34 3 214					x				x				x					
	2 34 3 215					x				x				x					
Pad slide	2 34 3 130	x	x	x			x	x	x		x	x	x		x	x	x	x	x
	2 34 3 132				x														
	2 34 3 150					x				x				x					
Stop	2 34 2 023	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	2 34 2 040	x	x	x			x	x	x		x	x	x		x	x	x	x	x
	2 34 2 050				x	x				x				x					

4.6.1.1 Pad holder set

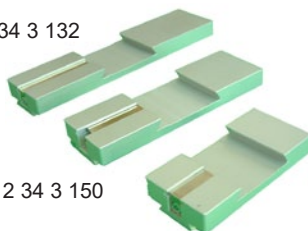


2 34 3 210

Product ID	Description	Type	Includes
2 34 3 210	Pad holder set 1	TBS 1	TS 47/95, TK 27
2 34 3 211	Pad holder set 1A	TBS 1A	TS 47/95, TK 27 and TKA 27
2 34 3 212	Pad holder set 2	TBS 2	TS 47/95, TK 27, DHR 20, DHR 30, DHR 40
2 34 3 213	Pad holder set 2A	TBS 2A	TS 47/95, TK 27, DHR 20, DHR 30, DHR 40 and TKA 27
2 34 3 214	Pad holder set 3	TBS 3	TS 57/150, TK 27
2 34 3 215	Pad holder set 3A	TBS 3A	TS 57/150, TK 27 and TKA 27

4.6.1.2 Pad slide

2 34 3 132



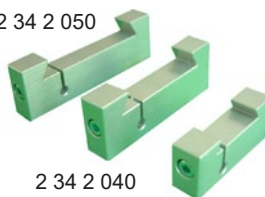
2 34 3 150

2 34 3 130

Product ID	Description	Type	Dimension
2 34 3 130	Pad slide	TS 47/95	Dove tail 47 mm Length 95 mm
2 34 3 132	Pad slide	TS 57/190	Dove tail 57 mm Length 190 mm
2 34 3 150	Pad slide	TS 57/150	Dove tail 57 mm Length 150 mm

4.6.1.3 Stop for pad clamping buckle and for pad slide

2 34 2 050



2 34 2 040

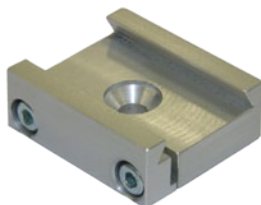
2 34 2 023

Product ID	Description	Type	Dimension
2 34 2 023	Stop for pad clamping buckle TK 27	TKA 27	
2 34 2 040	Stop for pad slide TS 47/95	TSA 47	
2 34 2 050	Stop for pad slide TS 57/150 and TS 57/190	TSA 57	

4.6.1.4 Pad clamping buckle



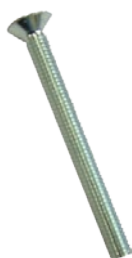
2 34 0 023



2 34 0 025

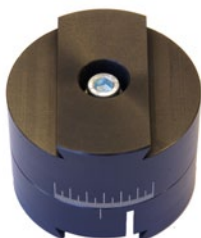
Product ID	Description	Type	Dimension
2 34 0 023	Pad clamping buckle	TK 27	Dove tail 27mm
2 34 0 025	Pad clamping buckle, low	TKN 27	Dove tail 27mm

4.6.1.5 Screw countersunk



Product ID	Description	Type	Dimension
2 34 0 115	Screw countersunk	SS15	M6 x 35
2 34 0 120	Screw countersunk	SS20	M6 x 40
2 34 0 125	Screw countersunk	SS25	M6 x 45
2 34 0 130	Screw countersunk	SS30	M6 x 50
2 34 0 135	Screw countersunk	SS35	M6 x 55
2 34 0 140	Screw countersunk	SS40	M6 x 60

4.6.1.6 Rotary pad holder



2 34 4 021

Product ID	Description	Type	Dimension
2 34 4 021	Rotary pad holder	DTH 27	Dove tail 27 mm

4.6.1.7 Plastic spacer



2 34 1 040

Product ID	Description	Type	Dimension
2 34 1 015	Spacer	DHR 15	L = 15 mm
2 34 1 020	Spacer	DHR 20	L = 20 mm
2 34 1 025	Spacer	DHR 25	L = 25 mm
2 34 1 030	Spacer	DHR 30	L = 30 mm
2 34 1 035	Spacer	DHR 35	L = 35 mm
2 34 1 040	Spacer	DHR 40	L = 40 mm

4.6.1.8 Aluminium spacer



Product ID	Description	Type	Dimension
2 34 1 140	Spacer	DHT 40	L = 40 mm
2 34 1 160	Spacer	DHT 60	L = 60 mm
2 34 1 180	Spacer	DHT 80	L = 80 mm

4.6.1.9 Screw cylinder head



Product ID	Description	Type	Dimension
2 34 1 190	Screw cylinder head	ZS25	M6 x 25

4.6.1.10 Pad rail extension



2 34 3 220

Product ID	Description	Type	Dimension
2 34 3 220	Pad rail extension for Smart 2 color. Lengthens pad rail from 165mm to 240mm	TSV 47/240	

4.6.2 Pad Shuttle systems

		Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
Pneumatic Pad Shuttle	2 62 0 120		x																
	2 62 0 160		x					x											
Pad Shuttle Modul	2 62 0 080															x			
	2 62 0 091																x	x	
	2 62 0 165															x	x	x	
Multi color Pad Shuttle	2 62 0 250							x	x				x						
	2 62 0 350									x			x						
	2 62 0 502									x				x					
Multi color Pad Shuttle with connections for selective pads	2 62 0 251												x						
	2 62 0 351												x						
	2 62 0 503													x					

4.6.2.1 Pneumatic Pad Shuttle



2 62 0 120



2 62 0 160

Product ID	Description	Type	Dimension
2 62 0 120	2-color Pad Shuttle for Smart 250	SM 250	130 mm, pneumatic
2 62 0 160	2-3 color Pad Shuttle for MS 250 and for Smart 250	FT 2-3	160 mm (±60 - ± 80 mm center position) pneumatic

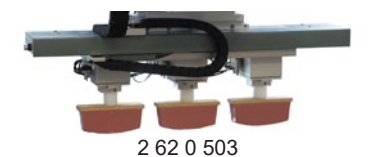
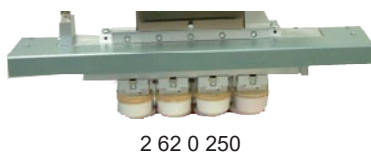
4.6.2.2 Pad Shuttle Modul



2 62 0 080

Product ID	Description	Type	Dimension
2 62 0 080	Pad Shuttle for Modul 130	MFT 80	± 40mm Linear motor
2 62 0 091	Pad Shuttle for Modul 170 / 220	MFT 120	± 60mm Linear motor
2 62 0 165	Pad Shuttle for Modul 130 / 170 / 220	MFT 160	± 80mm Linear motor

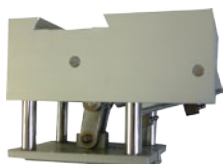
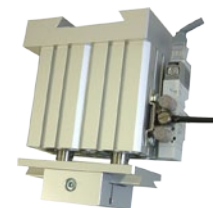
4.6.2.3 Multi-color Pad Shuttle



Product ID	Description	Type	Dimension
2 62 0 250	Multi-color Pad Shuttle for MS 250, MS 350 and ML 350	MFT 250	± 100 mm Linear motor
2 62 0 251	Multi-color Pad Shuttle for ML 350 with 5 connections for selective pads	MFT 250/S	± 100 mm Linear motor
2 62 0 350	Multi-color Pad Shuttle for ML 350 and MS 500	MFT 350	± 130 mm Linear motor
2 62 0 351	Multi-color Pad Shuttle for ML 350 with 5 connections for selective pads	MFT 350/S	± 130 mm Linear motor
2 62 0 502	Multi-color Pad Shuttle for MS 500 and ML 500	MFT 501	± 200 mm Linear motor
2 62 0 503	Multi-color Pad Shuttle for ML 500 with 5 connections for selective pads	MFT 501/S	± 200 mm Linear motor

4.6.3 Selective pad

4.6.3.1 Standard selective pad



Product ID	Description	Type	Dimension
2 62 0 230	Selective pad	STZ 30	Cylinder/stroke 30 mm
2 62 0 240	Selective pad	STK 30	Toggle/stroke 30 mm

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
2 62 0 230												x	x					
2 62 0 240												x	x					

4.6.3.2 Special selective pad

We also develop and manufacture special selective pads and pad shuttles.



4.7 Machine base



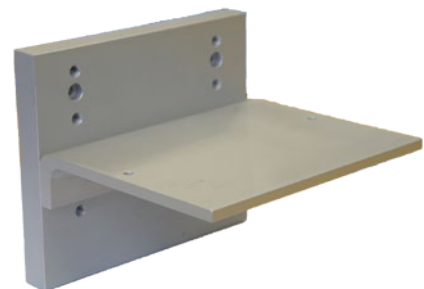
LCN machine stand

If a LCN pad printer is not mounted to another unit, you will need a stand to use the LCN as a table printer.

The height of the pad printing machine can be adjusted using the hand wheel.

Machine table for table machines

Smaller pad printers which are to be used without a base, can be attached to a machine table. This table can be adjusted in height and used to attach customer specific retainers or a cross table.



Base for stand alone machine

For manual work places we offer machine bases with height adjustable machine tables.

Safety cell for highest requirements

The safety cell consists of a left and right door and a firmly attached back wall. The front working space is safeguarded by a light sensor.

The machine table can be adjusted in height.

The necessary safety module is integrated into the safety cell.



4.7.1 Machine stand for LCN



2 40 0 150

Product ID	Description	Type	Dimension
2 40 0 130	Machine stand with height adjustment for LCN 131	MLC 131	
2 40 0 132	Machine stand with height adjustment for LCN 133	MLC 133	
2 40 0 150	Machine stand with height adjustment for LCN 151	MLC 151	

4.7.2 Small machine table for MS



2 40 0 340

Product ID	Description	Type	Dimension
2 40 0 340	Small machine table for MS 130/250/350 (adapted cross table KT XYR C2)	MTE 350	

4.7.3 Machine base for Smart, MS, ML and Modul



2 40 0 350

Product ID	Description	Type	Dimension
2 40 0 350	Machine base with short table	MTK 350	920x450x920
2 40 0 352	Machine base without table	MT 350	870x450x920
2 40 0 502	Machine base with table	MT 500	1180x620x900
2 40 0 503	Machine base with height adjustment	MTH 500	1200x620x 900-1100



2 40 0 502



2 40 0 503

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 220	5-Star
2 40 0 350	x	x				x	x	x									
2 40 0 352	x	x				x	x	x									
2 40 0 502							x	x	x			x	x		x	x	
2 40 0 503																x	

4.7.4 Safety Cell



2 40 0 803 with ML 350



2 40 0 804 with ML 500



2 40 0 820 with Smart 250 and base

Product ID	Description	Type	Dimension
2 40 0 803	Safety cell with machine base, light barrier, 2 doors	SZ-500	1400x1200x1900
2 40 0 804	Safety cell with machine base, light barrier, 2 doors	SZ-500L	1600x1200x1900
2 40 0 820	Safety cell with light barrier and doors, without machine base	SZ-130 LS	1000x800x670
2 40 0 821	Safety cell with two-hand-switch and plastic suspension panels, without machine base	SZ-130 2H	1000x800x670

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
2 40 0 803							X	X	X			X			X			
2 40 0 804													X			X	X	
2 40 0 820	X	X				X	X											
2 40 0 821	X	X				X	X											

4.7.5 Safety Cell with Rotary Indexing Table

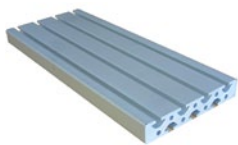


2 40 0 805 with ML 500

Product ID	Description	Type	Dimension
2 40 0 805	Safety cell with rotary indexing table and control; Safety cell with machine base, light barrier, 2 doors Rotary indexing table, 2 or 4 positions, ø 600 mm for add-on version machines (ALPP)	SZ-500L-RT600	

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 220	5-Star
2 40 0 805												X	X		X	X	X

4.7.6 T-slot table



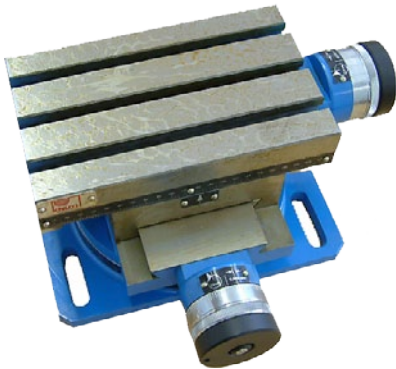
2 40 0 522



2 40 0 530

Product ID	Description	Type	Dimension
2 40 0 522	T-slot table	TPL 2	160 x 390 mm
2 40 0 530	Nut for T-slots	TNM6	M6

4.8 Part positioning



Cross Table

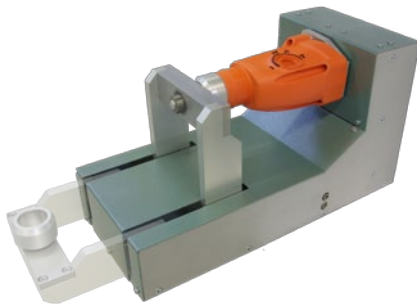
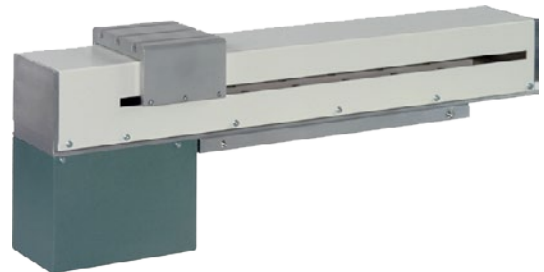
A Cross Table brings the print object into the exact position. It can be modified in X and Y directions. Some Cross Tables can also be adjusted in angle and height. Cross Tables are necessary in pneumatic pad printing machines, as these machines are unable to position the color release.

Shuttle Table

Shuttle table with 2 positions can be used for 2-color print or for large print objects.

Multi-position Shuttle Table can be used for multi-color printing or large print objects.

The table is brought into position with a stepping or linear motor.



Turning Device

The pneumatic turning device (DV-4) can be used to place the different print images on the top and bottom side of the print item.

The turning devices with stepping motor turns the print item in several steps. The rotation angle positions are set via the touchscreen display.

Swivel Device Robot

Our robot can rotate the object to be printed around two axes. Together with a pad printing machine with sequential programming the most complex parts can be printed in one single go.



4.8.1 Cross Table



2 42 0 006



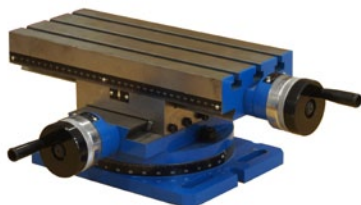
2 42 0 011



2 42 0 012



2 42 0 014



2 42 0 016

Product ID	Description	Type	Dimension l x w x h
2 42 0 006	Cross Table with XYR position, for very small parts	KT XY C0	120x50x30mm
2 42 0 011	Cross Table with XYR position, suitable for all machine bases, machine stands and tables	KT XYR C2	240x160x52mm
2 42 0 012	Cross Table with XYRZ position, suitable for Smart and MS 130/250/350 without base and without table	KT XYRZ C8	240x180x170mm
2 42 0 014	Cross Table with XYR position	KT XYR C10	372x329x155mm
2 42 0 016	Cross Table with XYR position	KT XYR C4	458x329x155mm

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
2 42 0 006			x ¹	x ¹	x ¹													x ¹
2 42 0 011			x	x	x	x ²	x ²							x	x	x	x	x
2 42 0 012	x	x				x	x	x										
2 42 0 014								x	x			x	x			x	x	x
2 42 0 016								x	x			x	x			x	x	x

¹ with adapter plate² with small machine table product ID 2 40 0 340

	Mounting table	Travel distance X-Axis	Travel distance Y-Axis	Travel distance Z-Axis	Swivel range table R
2 42 0 006	120x50mm	16mm	7mm	-	±8°
2 42 0 011	210x130mm	130mm	60mm	-	±10°
2 42 0 012	180x100mm	35mm	30mm	100mm	±5°
2 42 0 014	230x144mm	160mm	120 mm	-	360°
2 42 0 016	335x144mm	260mm	120 mm	-	360°

4.8.2 Shuttle Table

		Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
2- position Shuttle Table	2 62 2 110	x	x				x	x	x	x			x	x		x	x	x	x
	2 62 1 301												x	x		x	x	x	
Multi-position Shuttle Table	2 62 2 500								x	x			x	x			x	x	x
	2 62 2 550								x	x			x	x			x	x	
	2 62 2 555								x	x			x	x			x	x	
XY-Shuttle Table	2 62 2 510																		x
	2 62 2 520																		x

4.8.2.1 2-position Shuttle Table



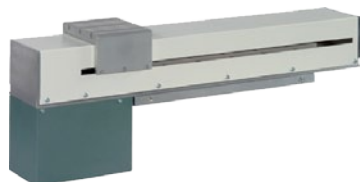
2 62 2 110



2 62 1 301

Product ID	Description	Type	Dimension
2 62 2 110	2-position Shuttle Table	VT 2 150	Plate: 175x175mm Travel distance: 120-160mm adjustable Drive: pneumatic
2 62 1 301	2-position Turn Table	DT 2 180°	Travel distance: 180° Drive: pneumatic

4.8.2.2 Multi-position Shuttle Table



2 62 2 500



2 62 2 550 / 555

Product ID	Description	Type	Dimension
2 62 2 500	Multi-position Shuttle Table	VT x 450 s	Plate: 120x150mm Travel distance: 450mm Drive: stepping motor
2 62 2 550	Multi-position Shuttle Table	VT x 680 s	Plate: 240x190mm Travel distance: 680mm Drive: stepping motor
2 62 2 555	Multi-position Shuttle Table	VT x 680 l	Plate: 240x190mm Travel distance: 680mm Drive: linear motor

4.8.2.3 XY-Servo Shuttle Table for 5-Star



Product ID	Description	Type	Dimension
2 62 2 510	XY-Servo Shuttle Table 510 for 5-Star	VT xy 510	Plate: 150x500mm Travel distance: 510mm Drive: servomotor
2 62 2 520	XY-Servo Shuttle Table 520 for 5-Star	VT xy 520	Plate: 300x300mm Travel distance: 520mm Drive: servomotor

4.8.3 Turning device

The pneumatic turning device (DV-4) can be used to place the different print images on the top and bottom side of the print item.

The turning devices with stepping motor turns the print item in several steps. The rotation angle positions are set via the control.



2 62 3 810

Product ID	Description	Type	Drive
2 62 3 810	Turning device for Smart, MS 250; 2 positions	DV-4	Pneumatic
2 62 3 625	Turning device for MS 130/250, several steps	DV-2	Stepping motor
2 62 3 800	Turning device for ML 350/500; several steps 360° / 3° indexed	DV-9	Stepping motor
2 62 3 801	Turning device for ML 350/500; several steps 360° / without indexing	DV-8	Stepping motor



2 62 3 625



2 62 3 800

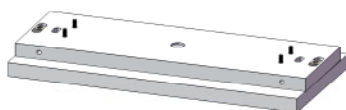
4.8.4 Swivel device Robot



2 62 3 722

Product ID	Description	Type	Dimension
2 62 3 710	Robot with swivel movement 180° for ML 350	Robot 1/0	
2 62 3 711	Robot with swivel movement 180° and vacuum for ML 350	Robot 1/1	
2 62 3 712	Robot with swivel movement 180°, vacuum and clamping for ML 350	Robot 1/2	
2 62 3 720	Robot with swivel movement 180°/180° for ML 350	Robot 2/0	
2 62 3 721	Robot with swivel movement 180°/180° and vacuum for ML 350	Robot 2/1	
2 62 3 722	Robot with swivel movement 180°/180°, vacuum and clamping for ML 350	Robot 2/2	

4.8.5 Angular adjustment for shuttle table



2 62 2 900

Product ID	Description	Type	Dimension
2 62 2 900	Angular adjustment for shuttle table	WV1	± 1.3°

4.8.6 Pendulum Table

Pendulum Tables help increase production. The table is mounted between pad printer and foot switch. Two parts retainer are mounted on the table. While the pad printer prints the part in the first retainer, a new part can be placed in the second parts retainer.



2 62 1 300

Product ID	Description	Type	Dimension
2 62 1 300	Pendulum Table	RTP300	D = 300 mm 180°

	Smart 130	Smart 250	LCN 131	LCN 133	LCN 151	MS 130	MS 250	MS 350	MS 500	MSS 130	MSS 350	ML 350	ML 500	Modul 110	Modul 130	Modul 170	Modul 220	5-Star
2 62 1 300	x*	x*	A	x	x	x*	x*	x*	x*			x*	x*	x*	x*	x*	x*	x

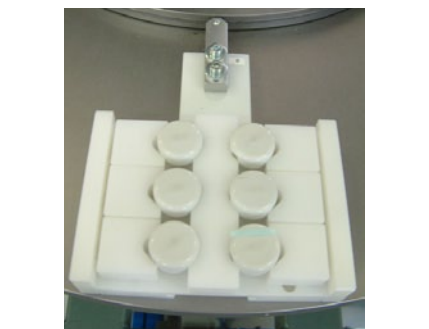
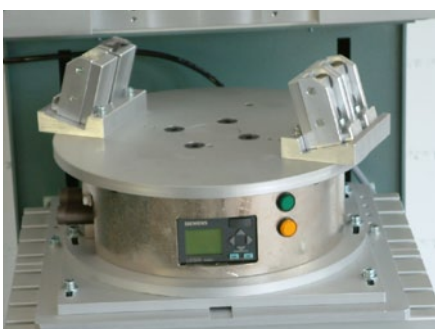
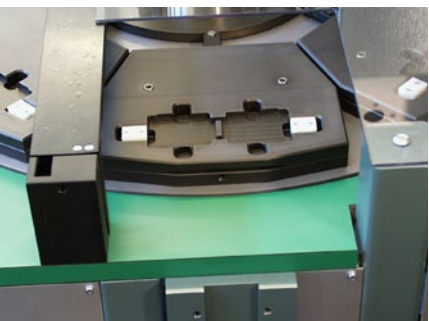
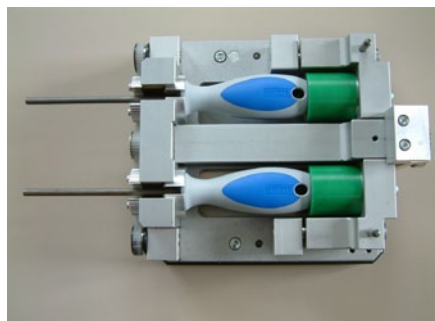
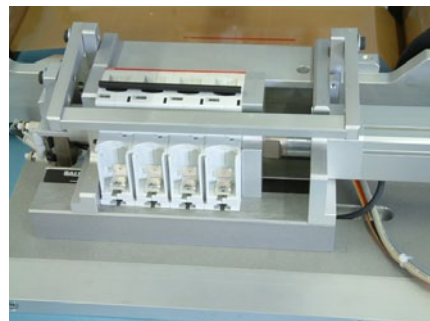
(x* with machine base)
(A; LCN 131 with T-slot table 2 40 0 522)

4.8.7 Parts Retainers Devices

4.8.7.1 Parts retainers

Parts retainers are always special solutions and adapted to suit the individual applications.

The following examples of parts retainers were developed by microPrint:



4.9 Pretreatment units

Depending on the type of material which is to be printed, the surface must be pre-treated so that it can take on the color. For good results the print material must have a surface tension of at least 38 mN/m; otherwise the ink might smudge. We offer system-integrated pre-treatment units, as well as customer-specific individual solutions. In addition to treating with corona, flames or plasma for increased surface tension, we also offer ionisation units which reduce electrostatic charging.

4.9.1 Measure the surface tension

4.9.1.1 Test pen



Product ID	Description	Type	Dimension
2 23 0 200	Pen-set 32-34-36-38-40-42-44 mN/m/ non-toxic 7 pens	TP1-34-42	

4.9.1.2 Test ink



Product ID	Description	Type	Dimension
2 23 0 250	Ink-set 32-34-36-38-40-42-44 mN/m / non-toxic 7 vials	TT1-32-42	10 ml

4.9.2 Flame

Flame pre-treatment units are used to increase surface tension to promote ink adherence.

The unit works with an open flame over the print object. Time and intensity can be regulated. The flame is generated through gas and requires a surplus of oxygen for the necessary chemical reaction. Polar groups are formed by breaking up the molecular connections and adding ions from the flames. This process increases surface tension and allows the ink to adhere.

Flame pretreatment devices are available as stand-alone units or they can be integrated into the unit. These devices are always custom-made.



4.9.2.1 Flame pre-treatment unit



Flame pre-treatment unit



Standard burner

Product ID	Description	Type	Burner width/ capacity
2 64 0 300	Flame pre-treatment unit Hill Burner controls WF 05-1 with single-row standard burner 50	FVWF3K	50 mm max. 3 kW
2 64 0 310	Flame pre-treatment unit Hill Burner controls WF 10-1 with single-row standard burner 100	FVWF6.5K	100 mm max. 6.5kW
2 64 0 320	Flame pre-treatment unit Hill Burner controls WF 20-1 with single-row standard burner 200	FVWF13K	200 mm max. 13kW
2 64 0 330	Flame pre-treatment unit Hill Burner controls WF 40-1 with single-row standard burner 400	FVWF26K	400 mm max. 26kW

4.9.3 Plasma

A plasma pretreatment unit is used to increase surface tension to promote ink adherence.

Plasma is considered the most effective pre-treatment in pad printing due to its combined chemical and physical effects. The treatment reaches over 10nm in depth, while other pre-treatment methods range between 5 to 10 nm. The plasma generator produces a potential-free plasma beam. The article to be printed is not subjected to high voltage and therefore potential-free. For this reason, plasma units are usually used on very difficult surfaces and where absolute process stability is required.

Plasma pretreatment devices are available as stand-alone units or they can be integrated into the unit. These devices are always custom-made.

4.9.3.1 Plasma units with slot nozzles



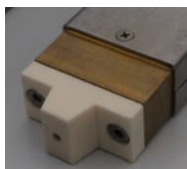
Product ID	Description	Type	Operating range
2640201	Plasma pre-treatment unit Plasma-CAT compact S-1Kc	PVCS1K	22 mm 700 W
2640202	Plasma pre-treatment unit (2 heads) Plasma-CAT compact S-2Kc	PVCS2K	2x22 mm 1400 W



4.9.3.2 Plasma units with focus nozzles



Product ID	Description	Type	Operating range
2640211	Plasma pre-treatment unit Plasma-CAT compact F-1Kc	PVCF1K	ø 15 mm 700 W
2640212	Plasma pre-treatment unit (2 heads) Plasma-CAT compact F-2Kc	PVCF2K	2x ø 15 mm 1400 W



4.9.4 Ionization unit

Electrostatic charging occurs in many plastics due to contact or friction, often generated during the actual manufacturing process. This charge can affect the print negatively depending on weather and humidity.



Example of a poor print caused by electrostatic charge

The ionization unit is made up of an ionization electrode and an air jet unit. The ionized air jet is electrically conductive and removes the static charge. The ion generator operates with compressed air which, at the same time, removes dust.

4.9.4.1 Electrostatic Meter for gauging electrostatic charges



Product ID	Description	Type	Dimension
2 22 0 640	Electrostatic Meter with handle	ELA1-S	110x40x20mm

4.9.4.2 Devices for reducing electrostatic charges

The ionization device reduces an electrostatic charging of the print surface to prevent the ink from splattering.



2 22 0 644

Product ID	Description	Type	Dimension
2 22 0 644	Ionizer Nozzle Type	ELA1-10	110x46x16mm
2 22 0 651	Spare part: electrode needle for ELA1-10	ELA1-10-1	
2 22 0 652	L-bracket for ELA1-10	ELA1-10-2	
2 22 0 653	Pivoting bracket ELA1-10	ELA1-10-3	



2 22 0 652
with 2 22 0 644



2 22 0 653
with 2 22 0 644



2 22 0 663

Product ID	Description	Type	Dimension
2 22 0 680	Ionizer with electrode cartridges	ELA1-340	Bar length; 340 mm
2 22 0 681	Ionizer with electrode cartridges	ELA1-400	Bar length; 400 mm
2 22 0 682	Ionizer with electrode cartridges	ELA1-460	Bar length; 460 mm
2 22 0 663	Spare part: electrode cartridge for ELA1-340/400/460	ELA1-HEK	
2 22 0 665	End bracket for ELA1-340/400/460	ELA1-EK	



2 22 0 670

Product ID	Description	Type	Dimension
2 22 0 670	Fan type ionizer	IFZ10-P-B	80x110x39mm

4.10 Drying units

The process of drying requires air, warm air, infrared or near-infrared light. UV light is needed for UV inks. We offer drying devices integrated into our machines as well as individual solutions tailored to your needs.

4.10.1 Air diffuser device

In multiple layer prints, air diffusers are used to help the individual ink layers dry during the printing process. This makes the ink layers stickier and subsequent layers adhere better. Air diffuser systems operate with compressed air which can be regulated over valves.



2 04 1 050

Product ID	Description	Type	Dimension
2 04 1 050	Pad air diffuser device Flex 5	TB Flex5	



The pad air diffuser device can be mounted with screws **laterally**.



The pad air diffuser device can be mounted with screws **horizontally**.



The pad air diffuser device can also be mounted **magnetically**.



2 04 1 100



2 04 1 112

Product ID	Description	Type	Dimension
2 04 1 100	Segments / 10 elements	Flex SS	Length 140mm
2 04 1 112	In-Line Valve / 1 piece	Flex KH	
2 04 1 102	T-Fitting / 1 piece	Flex T-SS	
2 04 1 120	Connector / 1 piece	Flex AS 8"	1/8"NPT
2 04 1 122	Connector / 1 piece	Flex AS 4"	1/4"NPT
2 04 1 110	Flat Hole Nozzle / 1 piece	Flex FD	Width 12mm
2 04 1 101	Elbow Fitting / 1 piece	Flex WS	
2 04 1 149	House Assembly Pliers 1/4" / 1 piece	Flex MZ	Length 180mm



2 04 1 102



2 04 1 120



2 04 1 122



2 04 1 110



2 04 1 101



2 04 1 149

4.10.2 Warm air system

Hot air blowers are used for warm/hot air drying after printing. You can adjust the temperature through the potentiometer located on the machine. Depending on the application, the warm air can be regulated as needed.



Product ID	Description	Type	Dimension
2 04 1 200	Hot air blower 2300 Watt, air quantity 150-500l/min.	HLF 2300	L 33.7 cm
2 04 1 202	Hot air blower 3400 Watt, air quantity max. 800l/min.	HLF 3400	L 35 cm



With air diffuser



Direct drying

4.10.3 NIR-drying

NIR radiation has an infrared range of 800 to 1200 nm. Here the polymers behave transparent. This means the actual heat dissipation is not the crucial factor for defining energy transfer. Moreover it is the radiation which penetrates deeply into the layer causing drying. As a result the entire colour film is heated and dries simultaneously improving colour adhesion significantly.

NIR-drying devices are available as stand-alone units or they can be integrated into the unit. These devices are always custom-made.



Drying cycle



Machine operation drying

4.11 Transport system

4.11.1 Conveyor Belt



Product ID	Description	Type	Dimension
2 22 0 760	Conveyor Belt	TB 100	280 x 1500 mm

Other dimensions on request.

4.12 Cleaning unit

4.12.1 ecoCleaner

Ecological Washing Unit for Pad Printing using active nanotechnology



No unpleasant odor



No harmful vapors

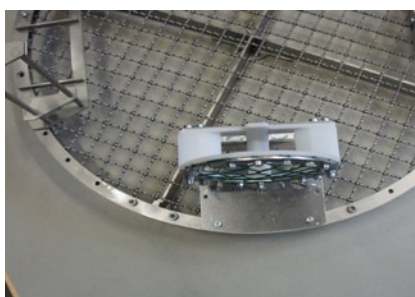


No inflammable cleaning medium

The ecoCleaner from Osmeco is a eco-friendly developed cleaning unit for pad printers. Compared to conventional solvent cleaning units which work with thinner, the ecoCleaner employs a special cleaning medium that is water-based. This cleaning Agent is virtually odorfree and of course non-explosive and non-flammable.

The soiled cleaning Agent is recycled within the unit and can therefore be re-used continuously. Merely the loss due to dispersion must be replaced from time to time. The separated soiled ink is automatically removed from the unit and deposited into a waste container (front of machine).

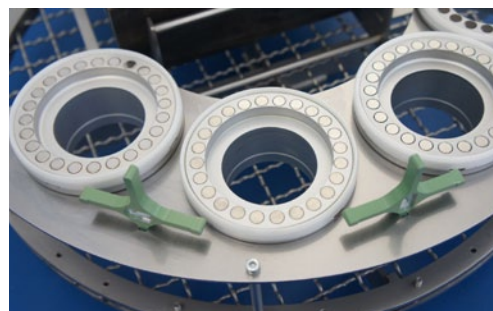
The ecoCleaner can be placed directly in any working environment. It is perfectly safe and there are no environmental hazards.



*Parts retainers
for magnetic cup*



*Parts retainers
custom-made*



*Basket for goods
custom-made*



2 80 1 022

Product ID	Description	Type	Dimension
2 80 1 022	ecoCleaner 500 Basket for goods, max size; Ø 500 mm, space 195 mm	eco 500	960 x 700 x 1060 mm
2 80 1 024	ecoCleaner 740 Basket for goods, max size; Ø 740 mm, space 195 mm	eco 740	1180 x 920 x 1120 mm

For more information on ecoCleaner go to www.osmeco.com.

4.13 Other accessories

4.13.1 Air service unit



2 40 0 011

Product ID	Description	Type	Dimension
2 40 0 011	Air service unit with soft start and emergency stop	WSE	

4.13.2 Foot switch



2 44 0 010

Product ID	Description	Type	Dimension
2 44 0 010	Foot switch (standard)	FSS	
2 44 0 011	Foot switch with safety cover	FSK	



2 44 0 011

4.13.3 Line cord



Product ID	Description	Type	Dimension
2 44 0 020	Line cord - CH	NK CH	2m
2 44 0 021	Line cord - D	NK D	2m
2 44 0 022	Line cord - USA	NK USA	1.8m

4.13.4 Tool set



2 44 0 050

Product ID	Description	Type	Dimension
2 44 0 050	Tool set (standard) 1x Allen key 2,5 1x Allen key 3 1x Allen key set	WZG	
2 44 0 051	Tool set (Smart) 1x Allen key 2,5 1x Allen key 3	WZK	

4.13.5 Lubricant for linear motor



2 92 1 901

Product ID	Description	Type	Dimension
2 92 1 901	Lin-Mot Lubricant	LMS	45g

4.13.6 Protective foils for displays



2 44 0 073



2 44 0 074

Product ID	Description	Type	Dimension
2 44 0 070	Protective foil for display GT11 for MS, MSS, Modul and LCN	SFGT 11	5 foils at 138x67mm
2 44 0 071	Protective foil for display 5-Star	SFS	10 foils at 118x88mm
2 44 0 072	Protective foil for display 6,5 inch for ML, Modul and Portal	SFB6.5	5 foils at 138x104mm
2 44 0 073	Protective foil for display 12 inch for unit	SFB12	5 foils at 247x186mm
2 44 0 074	Protective foil for display GT12 for MS, MSS, Modul and LCN	SFGT 12	5 foils at 143x71mm

4.14 Consumable

4.14.1 Mixing cups



For mixing inks.

Product ID	Description	Type	Dimension
2 23 0 002	Mixing cups / 100 pieces	MB	1,8 dl

4.14.2 Wooden stirrers



For mixing inks.

Product ID	Description	Type	Dimension
2 23 0 020	Wooden stirrers / 100 pieces	RH 1	150x18mm
2 23 0 022	Wooden stirrers / 100 pieces	RH 2	230x16mm

4.14.3 Visco-Scrapers and can opener



To check the viscosity of the ink during mixing and to open the ink can.

Product ID	Description	Type	Dimension
2 23 0 040	Visco-scrapers / Can opener made of stainless steel	VS 1	215mm long

4.14.4 Scales



For exact weights of inks, thinners and hardeners.

Product ID	Description	Type	Dimension
2 23 0 140	Scales 0-2000g in 0,1g increments	WG2000	95x100mm Weighing surface

4.14.5 Magnifier



2 23 0 160



2 23 0 162

For checking printing images, cliché and films.

Product ID	Description	Type	Dimension
2 23 0 160	Magnifier with LED illumination, 5-magnification factor, integrated scale 0-25mm	LUP1-1	Folded; 55x 41x 17mm
2 23 0 162	LED- hand illumination magnifier 2x/4x bifocal	LUP1-2	ø 70/22mm

4.14.6 Spray bottle



Easy handling and measuring of the liquid. If the hinge is locked, the bottle is absolutely tight.

Product ID	Description	Type	Dimension
2 23 0 180	Spray bottle with folding hinge closure Spray opening ø 3mm	SF1-05	500ml
2 23 0 182	Spray bottle with folding hinge closure Spray opening ø 3mm	SF1-10	1000ml

4.14.7 Gloves



The protective gloves are extremely resistant against organic and aromatic solvents, alcohols, acids, leaches, oils and fats.

Product ID	Description	Type	Dimension
2 23 0 380	Chemical protective gloves made of nitrile / 1 pair	HS1-01	Size 10

4.14.8 Dispenser-Safety Containers



2 23 0 400

2 23 0 401

Safe and economic distribution of cleaner on cleaning cloth.
The container also reduces evaporation and unpleasant odors.

Product ID	Description	Type	Dimension
2 23 0 400	Dispenser container / Steel powder coated	DB1-10	1l/ 180x200mm
2 23 0 401	Dispenser container / Steel powder coated	DB1-25	2.5l/180x290mm
2 23 0 402	Dispenser container / High quality steel	DBR1-10	1l / 180x200mm



2 23 0 402

4.14.9 Cleaning Tissues



Product ID	Description	Type	Dimension
2 23 0 420	Cleaning tissues	RP1-01	88 pcs./ box

4.14.10 Cleaning paper rolls



2 23 0 430



2 23 0 435



2 23 0 436

Robust and thick cloth for industrial use.

Product ID	Description	Type	Dimension
2 23 0 430	Cleaning paper rolls 2 pieces / box	RPR1-01	119m x 340mm
2 23 0 435	Holder for rolls, floor stand	RPS-01	1006 x 646mm
2 23 0 436	Holder for rolls, wall holder	RPH-01	463 x 646mm

4.14.11 Waste containers



2 23 0 440



2 23 0 442

Suitable for waste which is saturated with flammable liquids or generally harmful to the environment.

Product ID	Description	Type	Dimension
2 23 0 440	Waste container / Steel, red	AB1-50	50l
2 23 0 442	Waste container / High quality steel	ABR1-50	50l

4.14.12 Part cleaners



Product ID	Description	Type	Dimension
2 23 0 520	Part cleaner	TKC1-05	0.5l
2 23 0 521	Part cleaner	TKC1-10	1l

4.14.13 Skin cleaners

4.14.13.1 Skin protection

The hand protector cream forms an invisible, dirt-repellent film on the outer skin layer.

Product ID	Description	Type	Dimension
2 23 0 502	Skin protection (liquid gloves)	HPD1-1	150ml

4.14.13.2 Hand soap



2 23 0 500 with 2 23 0 501

Strong cleaner – easy on the skin

Product ID	Description	Type	Dimension
2 23 0 500	Hand soap	HR 0	Canister at 5kg
2 23 0 501	Dispenser for canister; white	HRS 0	

4.14.13.3 Dispenser



2 23 0 503

Double soap dispenser

Product ID	Description	Type	Dimension
2 23 0 503	Dispenser for 2 soft bottles	HRDP	330 x 278 mm
2 23 0 504	Solopol / Soft bottle for Dispenser Hand soap for heavy-duty soil	HR 4	2000 ml Soft bottle
2 23 0 505	Slig / Soft bottle for Dispenser Hand soap for removing stubborn dirt	HR 5	2000ml Soft bottle

4.14.13.4 Wet Wipes



2 23 0 510

These heavy-duty hand cleaning wipes have a pleasant smell and can be used without water or soap. They come with extra cleaning power, yet are mild and gentle to the skin. Removes dirt (oil, greases, ink) quickly and effectively.

Product ID	Description	Type	Dimension
2 23 0 510	Wet wipes	HRT 1	Dispenser includes 72 wipes.

Request for Quotation

Fax ++41 (0)52 624 50 22

Quantity	Product ID	Description	Type	Page

Address

Company	Last name
Dept.	First name
Street	E-mail
ZIP-Code, City	Phone
Country	Fax

☐ We would like to be contacted.

Message:

We are not responsible for printing errors and mistakes. We reserve the right for technical modifications and improvements without further notice.

Request for Quotation

Fax ++41 (0)52 624 50 22**Print object.:**

Description: _____

Material: _____

Dimension: _____

Print image:

1. Dimension: _____

Color: _____

2. Dimension: _____

Color: _____

3. Dimension: _____

Color: _____

4. Dimension: _____

Color: _____

5. Dimension: _____

Color: _____

6. Dimension: _____

Color: _____

Printing capacity:

Parts per hour : _____

Parts per annum: _____

Accessories:

Pretreatment units: _____

Drying units: _____

☐ with Viscomat☐ with parts retainers☐ with pad cleaning☐ with air diffuser☐ with ionization☐ with safety cell**Address**Company _____Last name _____Dept. _____First name _____Street _____E-mail _____ZIP-Code, City _____Phone _____Country _____Fax _____☐ We would like to be contacted.**Message:**

We are not responsible for printing errors and mistakes. We reserve the right for technical modifications and improvements without further notice.

Note

