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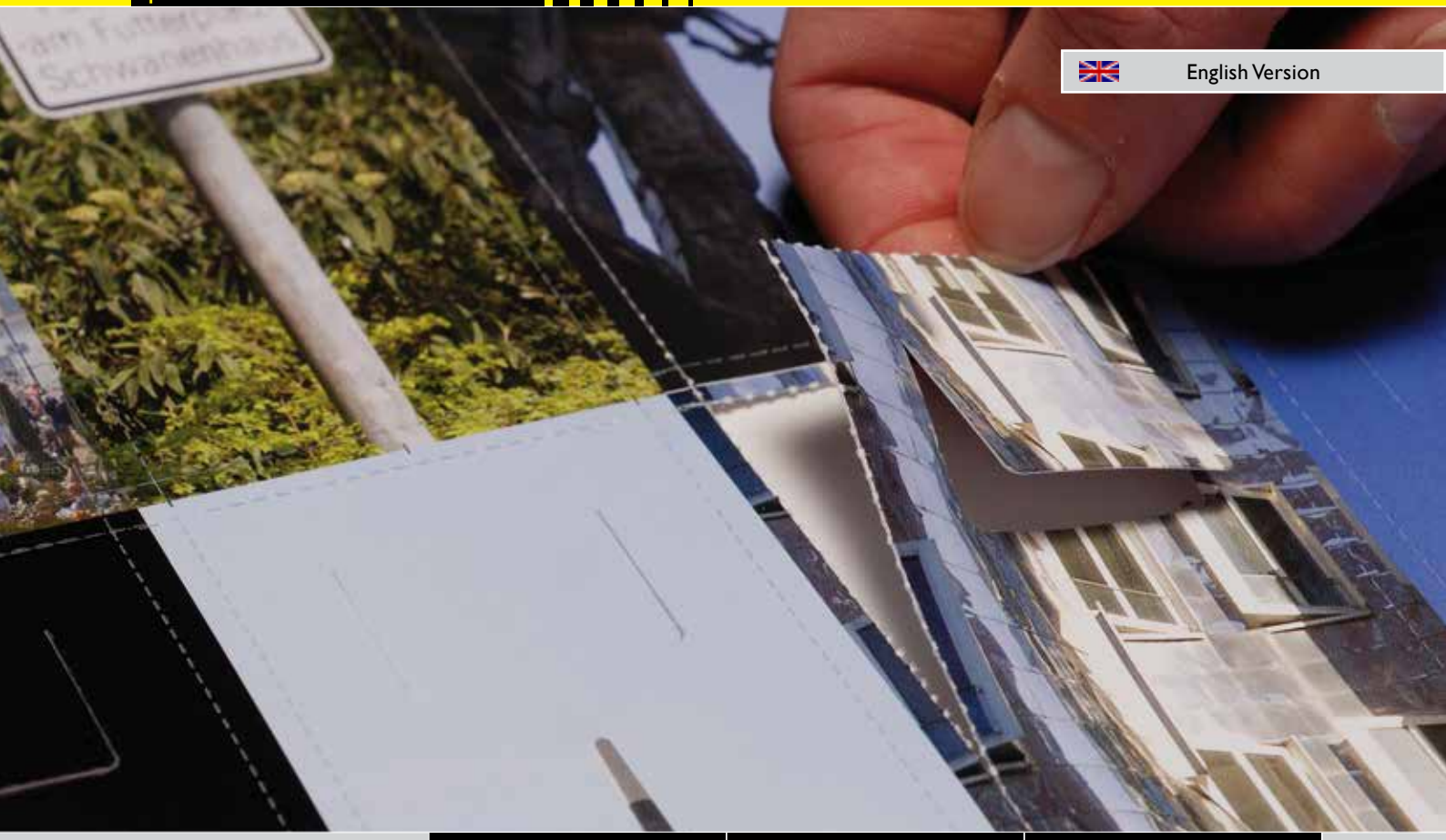
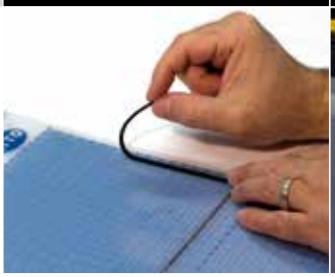
English Version





RSP Easy Sakurai OLIVER 66

The flexible system for inline finishing
Additional value creation on the offset printing press by creasing, diecutting, perforating ...

Operating Manual

a CITO GROUP Company

Contents

List of abbreviations:

Fig. = Figure, P = Printing unit,

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Printed in Germany

Foreword

With RSP Easy from CITO-System GmbH, your printing press is expanded easily and cost-effectively into a genuine finishing system.

Creasing, diecutting and perforating is enabled, without an additional machine, without additional personnel and without long set-up times.

Validity

All the information in the operating instructions corresponds to the version of RSP Easy at the time of publication (April, 2011).

We reserve the right to make changes for the purpose of technical progress. In the event of questions, please contact CITO System GmbH.

Trademark

RSP is internationally patented.

WARNING:

The RSP Easy Set may only be used with original accessories.

Before the commissioning of RSP Easy on the printing press, please read the operating instructions. Keep the operating instructions available to the operators of the press at all times.

Cleaning the RSP Easy

We recommend blanket wash for cleaning the base blanket.

We recommend blanket wash for removing adhesive residues from the base blanket.

Manufacturer‘s address:

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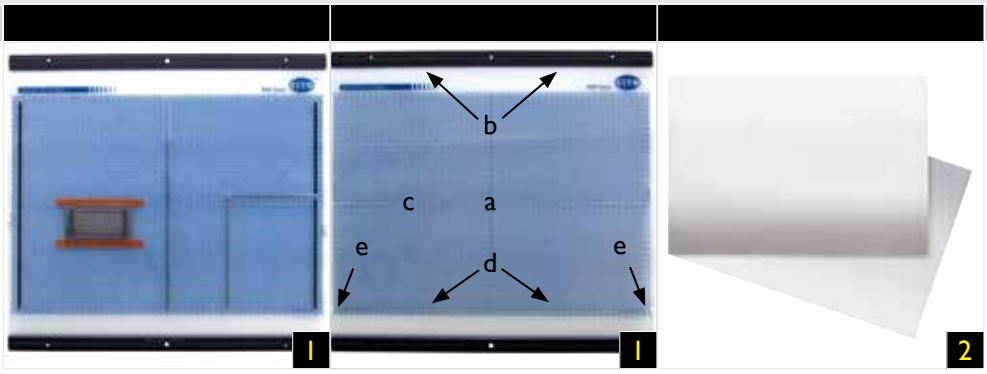
1. Structure of RSP Easy



1. Base blanket using the reduced millimetre scale (fig. 1)

Functions:

Packing for the tooling of the RSP inline finishing form with processing rules and/or flexible dies.

Mounting of the RSP inline finishing form with positioning accuracy outside the press by the circumferentially reduced millimetre scale.

a. Dimensionally stable plastic blanket
b. Clamping bars
c. Millimetre scale (circumferentially reduced)
d. Marking of the gripper margin on the print start side
e. Processing start marking for the alignment of the base blanket with the print start line of blanket cylinder.

2. Protective impression cylinder jacket (fig. 2)

Function: Protection of the impression cylinder

Stainless steel

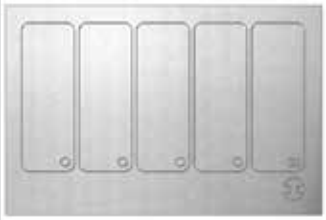
Laminated with special self-adhesive film

Residue-free removal from the impression cylinder after finishing

Availability:

Press type	Impression cylinder surface	Type of impression cylinder jacket
without perfecting	chrome	without perfecting
with perfecting	roughened surface	with perfecting

3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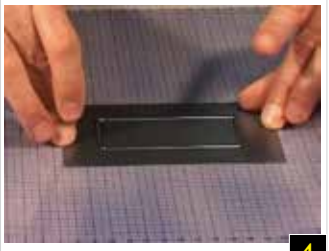
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3. RSP processing rules (fig. 3)

RSP creasing rule (standard R1/reduced height R2)

RSP cutting rule

RSP perforating rule (base tangent lengths: 8/12/16/35/50)

5. Flexible dies (fig. 4)

for perforating/diecutting of irregular shapes

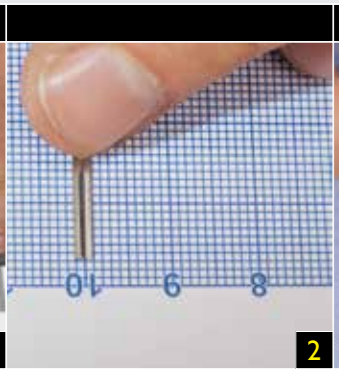
Flexible dies must be manufactured according to the RSP design standard!
For fixing of the magnetic flexible dies use our special adhesive tape adjusted to the required height.

Use only original RSP flexible dies supplied by CITO-SYSTEM GmbH:

stanzbleche@cito.de
Phone +49 911 95885-0

2. Mounting of the RSP form


1



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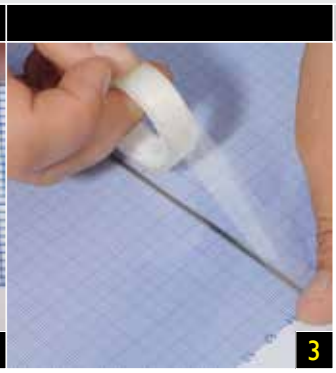

3

- Measure the print sheet using of the layout sheet in order to determine the necessary settings for making a creasing, diecutting and/or perforating form (fig. 1).

  The horizontal "zero line" on the base blanket corresponds with the front edge of the print sheet (fig. 2).

  Affix the processing rules or flexible dies to the base blanket in accordance with the pre-determined values and secure them with the enclosed adhesive tapes (fig. 3).
  Attention: No processing rules or flexible dies (flexible die edges) may be glued to the marked gripper edge.

Tip for mounting:

When creasing only, creasing rule R1 is used. When creasing and/or diecutting and/or perforating, however, creasing rule R2 has to be used.

Mount the RSP form laterally reversed ➔ "direct printing method"

Attention: Start of processing with RSP is possible from about 13 mm from the front edge of the sheet.

- Remove the self-adhesive supporting foam from the protective paper and affix the 3 mm wide supporting foam circumferentially
  (at the trim-off area) to the base blanket (fig. 4). Should there not be left any space free of colour it is possible to glue on perforation lines instead of supporting foam.

  The supporting foam ist used to keep the print sheet true to register in the free areas on the impression cylinder.

Tip:

With some paper grades resp. by longitudinal and diagonal unwinding there are various pressure conditions in the printing machine. Patching the traverse processing rules (parallel to the cylinder axle) is recommended in order to compensate for the differences in pressure. Here we recommend using CITO TAPE in the thicknesses 0.03 mm/ blue or 0.05 mm/red.

Simply stick a patching tape onto the back side of the grid sheet at the appropriate positions (fig. 5).

3. Mounting the RSP protective impression cylinder jacket

Important note:

Use the RSP Easy only with original accessories!

When using the RSP Easy declamp blanket and offset printing plate in the respective printing unit!

Switch off the ink ductor, inking form and dampening form rollers.

Never use damaged or worn RSP system components!

When installing and removing the RSP protective impression cylinder jacket, we recommend wearing safety gloves (RSP accessories).

To remove the RSP protective impression cylinder jacket safely and easily, we recommend our removal aid (RSP accessories).

Mounting the RSP protective impression cylinder jacket

- Set the respective printing unit manually to "print" and the spacing from blanket cylinder to impression cylinder to 0.00 mm.
- Remove about 5 cm of the protective tape from the front edge of the protective impression cylinder jacket and affix the protective impression cylinder jacket about 3 mm from the impression grippers and in the middle of the sides to the clean impression cylinder at the print start (fig. 1).


2

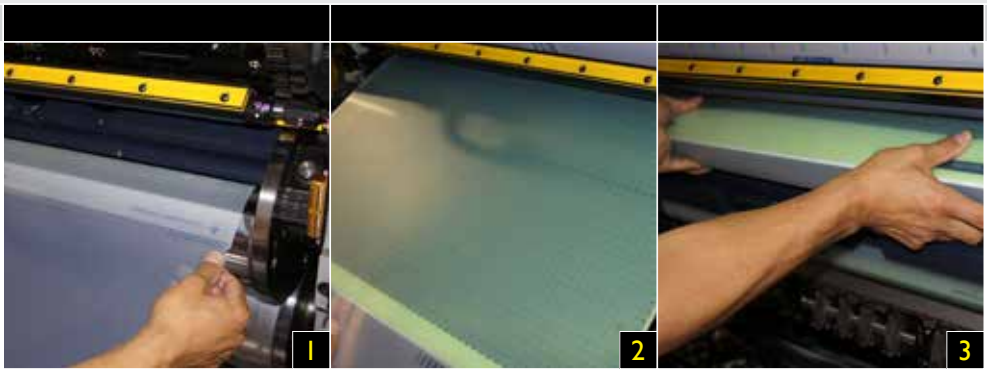
- Then gradually remove protective tape from the protective impression cylinder jacket, inch the impression cylinder forward in intervals and glue on the protective impression cylinder jacket.
- Let the press make three cylinder rotations in order to mangle the protective impression cylinder jacket to the impression cylinder. Then switch off impression again.
- Secure the protective impression cylinder jacket with the enclosed adhesive tape at print start and tail edge; after longer machine down-times check the adhesiveness before the start-up of the machine (fig. 2).
- Set the distance from blanket cylinder to impression cylinder to 0.35 mm.

Attention:

In case of roughened protective impression cylinder jackets it is absolutely necessary to use protective impression cylinder jackets "Perfektor" after perfecting.

The protective impression cylinder jackets and guaranteed for one single use only!

4. Installation of the base blanket



BEFORE INSTALLATION OF THE RSP EASY:

Switch off the plate damper.

Switch off the ink vibrator and the plate inkers.

Remove the printing plate from the plate cylinder.

Install the protective impression cylinder jacket (see page 8).

Remove the rubber blanket and packing sheets.

The automatic rubber blanket or impression cylinder wash-up device must not be used.

Installation of the base blanket into the print unit

- Inch the press forwards until the front lock-up shaft is easily accessible.
- Insert the front clamping bar of the base blanket into the front rubber blanket lock-up shaft. (fig. 1).
- Insert packing sheets of appropriate thickness beneath the base blanket as far as the packing sheet fastening bar (for determination of the packing height see page 17).
- Hold the rear clamping bar of the base blanket together with the calibrated packing sheet firmly under tension and feed in by inching forwards, until the rear lock-up shaft is accessible (fig. 2).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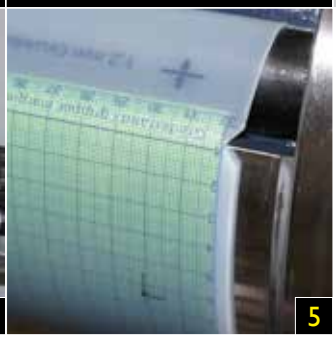
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- Insert the clamping bar into the rear lock-up shaft (fig. 3).
- Tighten the base blanket first at the rear lock-up shaft using a torque wrench set to 20 Nm. Then tighten the front lock-up shaft (fig. 4).
- Check whether the processing start marking at the leading edge is correctly positioned, and adjust if necessary (fig. 5).

5. Commissioning of RSP Easy

Processing start

Before the commissioning of RSP Easy, the processing start has to be adjusted to the correct position. In the correct position, the processing start marking of the base blanket and/or the tip of the indentation is in alignment with the print start line of the blanket cylinder. To adjust the alignment, set the rubber blanket lock-up shafts using the rubber blanket clamping screw.

Processing impression

Adjustment of the processing impression

- First copy: distance of blanket cylinder to impression cylinder 0.35 mm
- Proof sheet
- Throw-on or throw-off printing impression in accordance with the proof sheets in small steps

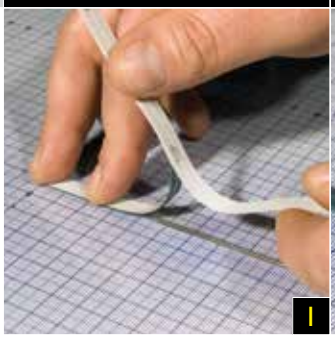
Adjustment of the processing impression in the special case of creasing only

- Distance of blanket cylinder to impression cylinder 0.35 mm
- Proof sheet
- Throw-on printing impression in accordance with the proof sheet in small steps until a slight impression of the creasing rule may be seen on the printing material.
- Reduction of the impression throw-on by 0.2 mm
- Transfer the offset creasing strip (see page 14)
- Adjust the creasing by throw-on or throw-off printing impression

NOTE

The optimum setting is achieved when the creasing bulge is at its maximum and delamination occurs within the creasing bulge. If an imprint of the offset creasing strip may be seen on the printing material, the impression is too high.

6. Positioning of the RSP offset creasing matrices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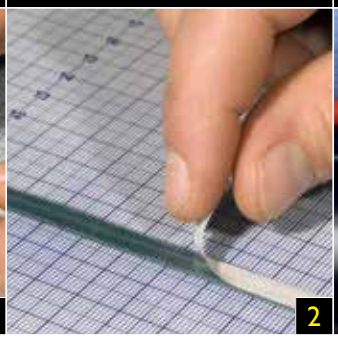
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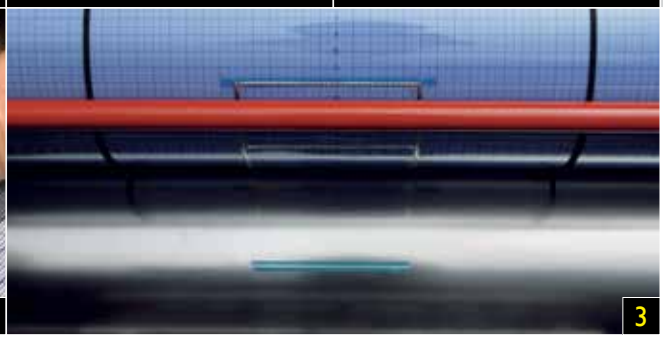
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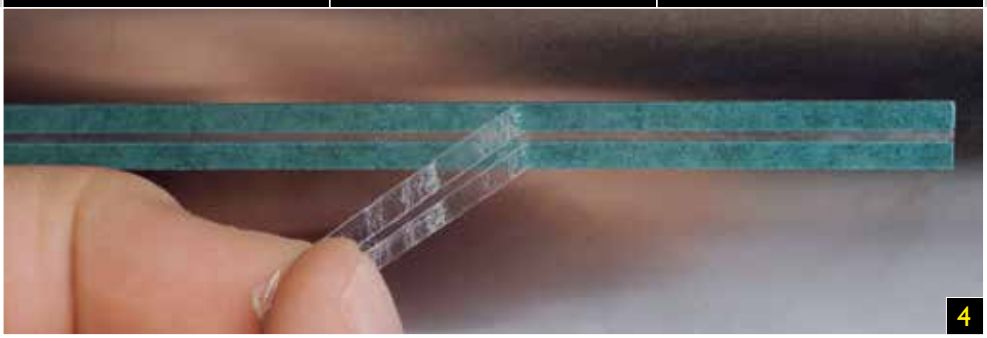
- With the RSP form mounted in register, the printing unit is set to print manually while the machine stands still.
- Remove the upper protective foil (TOP) from the offset creasing rule (fig. 1).
- Fix the offset creasing rule with the creasing channel side on the centre of the creasing rule of the RSP form, then remove the protective paper from the back-side of the offset creasing rule (fig. 2).
- Inch the cylinder backwards so that the blanket cylinder and the impression cylinder roll in the direction of each other (fig. 3).
  Now the offset creasing rules will position automatically and in perfect register to the impression cylinder when impression is thrown on.



- Remove the adhesive transfer tape from the creasing rule positioned on the impression cylinder (fig. 4).
- Switch off the manual impression again.
- In case of creasing only the printing pressure must be adjusted now.

Important note:

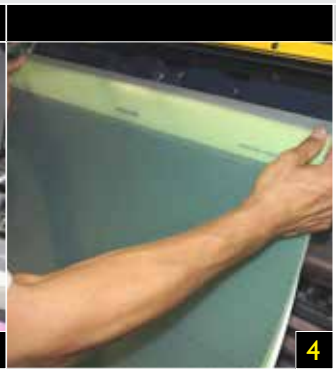
When creasing across the cylinder (parallel to the cylinder axle) the offset creasing rule is glued totally and the protective paper torn off the back side of the offset creasing rule.

When creasing only, set distance between impression cylinder and blanket cylinder to 0.35 mm.

Inch forward slowly until the creasing line slightly marks the paper/board. Afterwards set the position. Then transfer the creasing rule.

Afterwards reduce the printing pressure by 0.2 mm for best possible adjustment of the creasing.

7. Removal of the base blanket



NOTE:

Always remove the RSP Easy Set in reverse order to installation, i. e. rear edge first, leading edge afterwards.

- Inch the press forward until the rear lock-up shaft is easily accessible.
- Open the clamping screw of the rear lock-up shaft (fig. 1).
- Release the rear clamping bar of the base blanket from the fastening clamps of the rear lockup shaft by shifting the clamping bar downwards in the direction of the centre of the channel (fig. 2).
- Hold the rear clamping bar of the base blanket and packing sheet firmly and feed out under tension by inching the press backwards until the front lock-up shaft is accessible.
- Open the clamping screw of the front lock-up shaft (fig. 3).
- Release the front clamping bar of the base blanket from the fastening clamp of the front lock-up shaft (fig. 4).
- Remove the protective impression cylinder jacket.

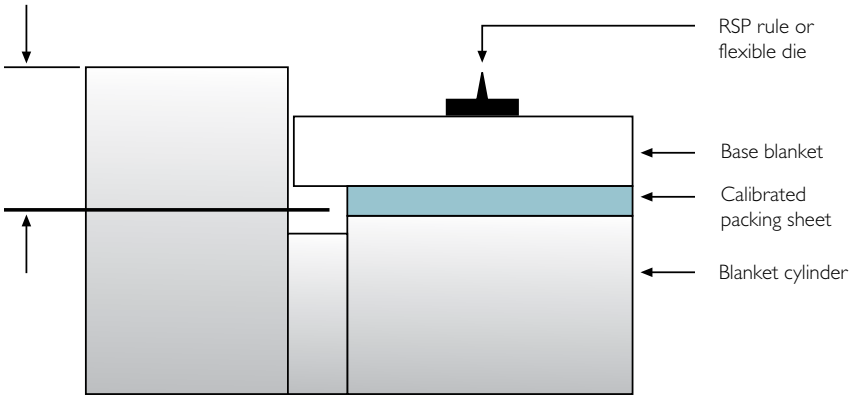
WARNING:

To avoid injury, always wear the safety gloves provided when removing the protection impression cylinder jacket.

8. Determination of the cylinder packing thickness

Determination of the cylinder packing thickness in connection with RSP Easy

Determination of the cylinder packing thickness depending on the blanket cylinder undercuts



WARNING NOTE:

RSP Easy Set must never be used above bearer height. For this reason always follow the penetration depth of your rubber blanket cylinder (machine operating manual).

Please note that the packing height on the blanket cylinder is always 0.25 mm below cylinder undercut. The thickness depth has to be checked before installation of RSP Easy into the machine and RSP Easy into the complete setup.

The total thickness of the calibrated underlay sheet that is required, is given dependent on the rubber blanket cylinder thickness depth, as follows:

Machine	Cylinder undercut		Base blanket		Tool mounting	Calibrated packing sheet
Sakurai Oliver 266 EPZ	3.00 mm	=	1.20 mm	+	0.90 mm	0.65 mm

9. Accessories

1

2

3

1. RSP Offset Creasing Matrices

Standard ORS (fig. 1)

H x W x L (mm)	unit
0.2 x 0.8 x 700	30 pcs.
0.2 x 1.0 x 700	30 pcs.
0.2 x 1.2 x 700	30 pcs.
0.3 x 0.7 x 700	30 pcs.
0.3 x 0.8 x 700	30 pcs.
0.3 x 1.0 x 700	30 pcs.
0.3 x 1.2 x 700	30 pcs.
0.3 x 1.3 x 700	30 pcs.

Off Center OCC (fig. 2)

H x W x L (mm)	unit
0.3 x 1.0 x 700	30 pcs.
0.3 x 1.2 x 700	30 pcs.
0.3 x 1.3 x 700	30 pcs.

2. RSP Supporting Foam

RSP Supporting Foam OSF (fig. 3)

W x L (mm)	unit
3.0 x 700	50 pcs.

1

2

3

3. RSP Perforating Rules (fig. 1)

Description	Cut : pitch	Unit
8 tpi Perfo	2.4 : 0.8 mm	6 m
12 tpi Perfo	1.4 : 0.8 mm	6 m
16 tpi Perfo	0.8 : 0.8 mm	6 m
35 tpi Perfo	0.3 : 0.4 mm	6 m
50 tpi Perfo	0.2 : 0.3 mm	6 m

4. RSP Cutting Rules (fig. 2)

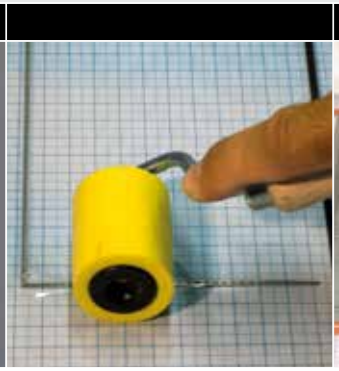
Description	Unit
Cut/Cut Rule	6 m

5. RSP Cutting Rules (fig. 3)

Description	Unit
Crease R1*	6 m
Crease R2**	6 m

* for creasing

** for creasing and cutting and/or perforating


6. RSP Accessories

Description	Unit
Adhesive tape for securing, 12 mm x 66 m	1 roll
Side cutter	1 pc.
Removal aid for protective impression cylinder jacket	1 pc.
Safety gloves S, M, L	1 pair
S 80 scissors	1 pc.
S 80 replacement blade	1 pc.
CITO TAPE blue, 0.03 mm, 40 m x 6.0 mm	3 rolls
CITO TAPE red, 0.05 mm, 30 m x 6.0 mm	3 rolls
RSP Manual Nick Grinder with rechargeable battery and special adapter	1 pc.
Diamond grinding disc 0.3 mm	1 pc.
Diamond grinding disc 0.4 mm	1 pc.
Diamond grinding disc 0.5 mm	1 pc.
Torque wrench set*, extension 250 mm & 17 mm socket	1 pc.
RSP mounting tool,	1 pc.
RSP adhesive tape for fixing the flexible dies onto the base blanket, 520 mm x 10 m	1 roll
RSP protective jackets lifter	1 pc.
RSP Creasing Rubber	

* to tighten base blanket

10. Recommendation

Recommendation for Selection of RSP Perfo Rules

Material to be inprinted	Use	Direction	Rules
Up to 100 g/qm coated	e.g. forms, fax orders, order forms	vertical and horizontal to perforation	16 tpi, 35 tpi, 50 tpi
Up to 200 g/qm coated and uncoated	Postcards	vertical and horizontal to perforation.	12 tpi, 16 tpi
	Flyers	vertical and horizontal to perforation.	12 tpi
	Calendars	vertical to perforation	12 tpi, 8 tpi
		horizontal to perforation	8 tpi
150 g/qm – 400 g/qm coated glossy or non glossy	Envelopes	vertical and horizontal to perforation.	12 tpi, 16 tpi
	Cards	vertical and horizontal to perforation.	8 tpi, 12 tpi
	Envelopes with flaps; perforation of the flap in the fold	vertical to fold	35 tpi
		horizontal to fold	12 tpi
	Cellophaned envelopes	vertical and horizontal to perforation.	8 tpi, 12 tpi

Note:

The values mentioned above are a rough guide for standard materials and are not binding

The following items have an imporant influence on the correct perfo rule:

- Weight of the material to be printed
- Direction
- Coated paper
- Uncoated paper
- Form of perforation

For special requirements a test perforation with all variations should be made on a print sheet with the respective material to be printed.

Recommendation for Selection of RSP Offset Creasing Matrices

Thickness of material	with lines	with felxible dies
0.10 mm	0.3 x 0.7 mm	0.2 x 0.8 mm
0.15 mm	0.3 x 0.8 mm	0.2 x 0.8 mm
0.20 mm	0.3 x 1.0 mm	0.2 x 1.0 mm
0.25 mm	0.3 x 1.0 mm	0.2 x 1.0 mm
0.30 mm	0.3 x 1.2 mm	0.3 x 1.0 mm
0.35 mm – 0.50 mm	0.3 x 1.3 mm	–

Note:

The value mentioned above are guide numbers and are therefore not binding.

The following factors have an important influence on the correct creasing strip:

- Pressure supply
- Hardness of material to be imprinted
- Humidity of material to be imprinted
- Makeready of the base blanked

Table: Printing material thicknesses

The printing material thicknesses indicated in the following tables are meant as guide numbers only.

Working with RSP flexible dies	in dry ink	in fresh ink
Only cutting and/or perforating	0.50 mm	0.45 mm
Only cutting and/or perforating in combination with creasing	0.27 mm	0.23 mm
Working with RSP rules		
Only cutting and/or perforating	0.50 mm	0.50 mm
Only creasing	0.40 mm	0.40 mm
Only cutting and/or perforating in combination with creasing	0.35 mm	0.26 mm

11. Troubleshooting

Installation of the protective impression cylinder jacket		
Problem	**Possible cause**	**Solution**
Poor adhesion of the protective	Surface of the impression cylinder is dirty	Clean the impression cylinder with IPA before sticking
No adhesion of the protective impression cylinder jacket	Roughened surface	Use protective impression cylinder jacket for press "with perfecting"
Too strong adhesion of the protective impression cylinder jacket	Protective impression cylinder jacket for press "with perfecting" used on chrome impression cylinder	Use protective impression cylinder jacket for press "without perfecting"

Commissioning of RSP Easy		
Problem	**Possible cause**	**Solution**
Imprint of the diecutting form on the impression cylinder	Protective impression cylinder jacket not installed	Install protective impression cylinder jacket (see page 8)
Damage to the plastic material of the base blanket	Tool above bearer height	See below: tool above bearer height
Tool above bearer height	Incorrect thickness of calibration sheets/ packing sheets	Correct the cylinder packing height (see page 17)
	Film with which the blanket cylinder has been fitted has not been taken into account	Correct the cylinder packing height (see page 17)
Collision of the diecutting form with the grippers	Tool stuck in the gripper margin of the base blanket	Keep the gripper margin free when mounting the base blanket (see page 6)

Diecutting/creasing/perforation result		
Problem	**Possible cause**	**Solution**
Impression of the rule base on the printing substrate	Maximum printing substrate thickness exceeded	Correct the printing substrate (see page 23)
Impression of the creasing channel on the printing substrate	Maximum printing substrate thickness exceeded	Correct the printing substrate (see page 23)
	Transfer sheet padding not removed	Remove padding (see page 14)
Poor tearing of the perforation rules	Movement direction not considered in the selection of the rule	Please observe the recommendations when selecting RSP perforation rules (see page 21)
Diecutting is mirror-inverted	Base blanket not mounted laterally reversed	Mount base blanket laterally reversed (see page 6)
Unwinding of the diecutting form does not fit	Reduction of the base blanket not considered	Do not compensate dimensions of the print sheet by packing the base blanket (see page 6)
Crease cuts off	Creasing rule R1 used in spite of same diecutting/perforation	Use creasing rule R2 (see page 6)
No diecutting/creasing/perforating on the beginning of the sheet	Processing start within approx. 13 mm from the front edge of the sheet	Processing start not possible until approx. 13 mm from the front edge of the sheet (see page 6)
Incorrect cross rule diecutting/creasing/perforating	Different pressure conditions	Adjust crosswise processing rules (see page 7)
Processing rules move around	Circumferential supporting foam forgotten	Use supporting foam (see page 7)
Diecutting result uneven and base blanket agitates	Base blanket not tightened with sufficient torque	Correct the tension on the base blanket (see page 11)
Diecutting form wears out quickly	Incorrect printing impression	Correct the printing impression, if necessary make-ready (see page 12)

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