

**XPRESS® - Next Generation Cutting Rule**

April 2010

**BÖHLER UDDEHOLM**  
precision *strip*



## Market Leader

Böhler-Uddeholm precision strip GmbH, with production sites in Austria and Sweden, is member of the Voest alpine AG group. Our core competence is in the production of cold rolled precision strip products for various applications.

With an outstanding history, tradition and the world wide sales network, we are recognised as world market leader in the production of **bi-metal strip, precision strip, steel rules and rule die steel.**



## Our Customers

We are completely focused on the requirements of our customers.

Our success is based on the succes of our customers. Our goal is to create added value together with our customers.





# **X**PRESS

# Next Generation Cutting Rule

## Cutting Process & Impact Criteria

### Make Ready = critical cost factor in diecutting

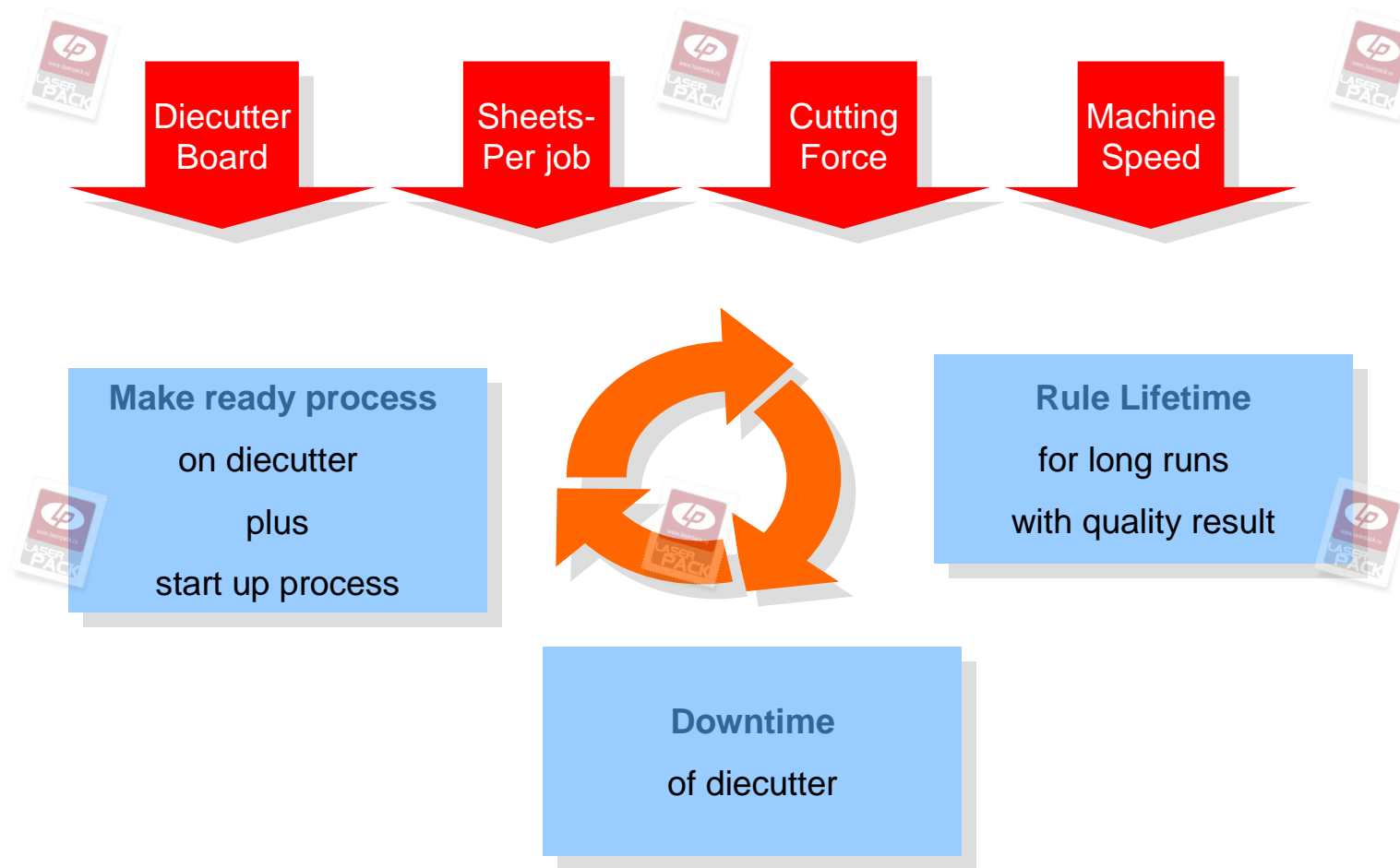
- Time consuming make ready & patching procedures necessary to achieve optimum diecutting results

### Parameters for diecutting

- Machine maintenance/condition
- Cutting force adjustment → negative impact on knife lifetime
- Board properties → humidity, thickness, fibres, filler contents, board surface, etc.
- Die layout
- Machine operator know-how
- Die quality

### Market Constraints

- Less sheets cut per job due to increasing no. of box designs
- As a consequence: more new & repeat orders

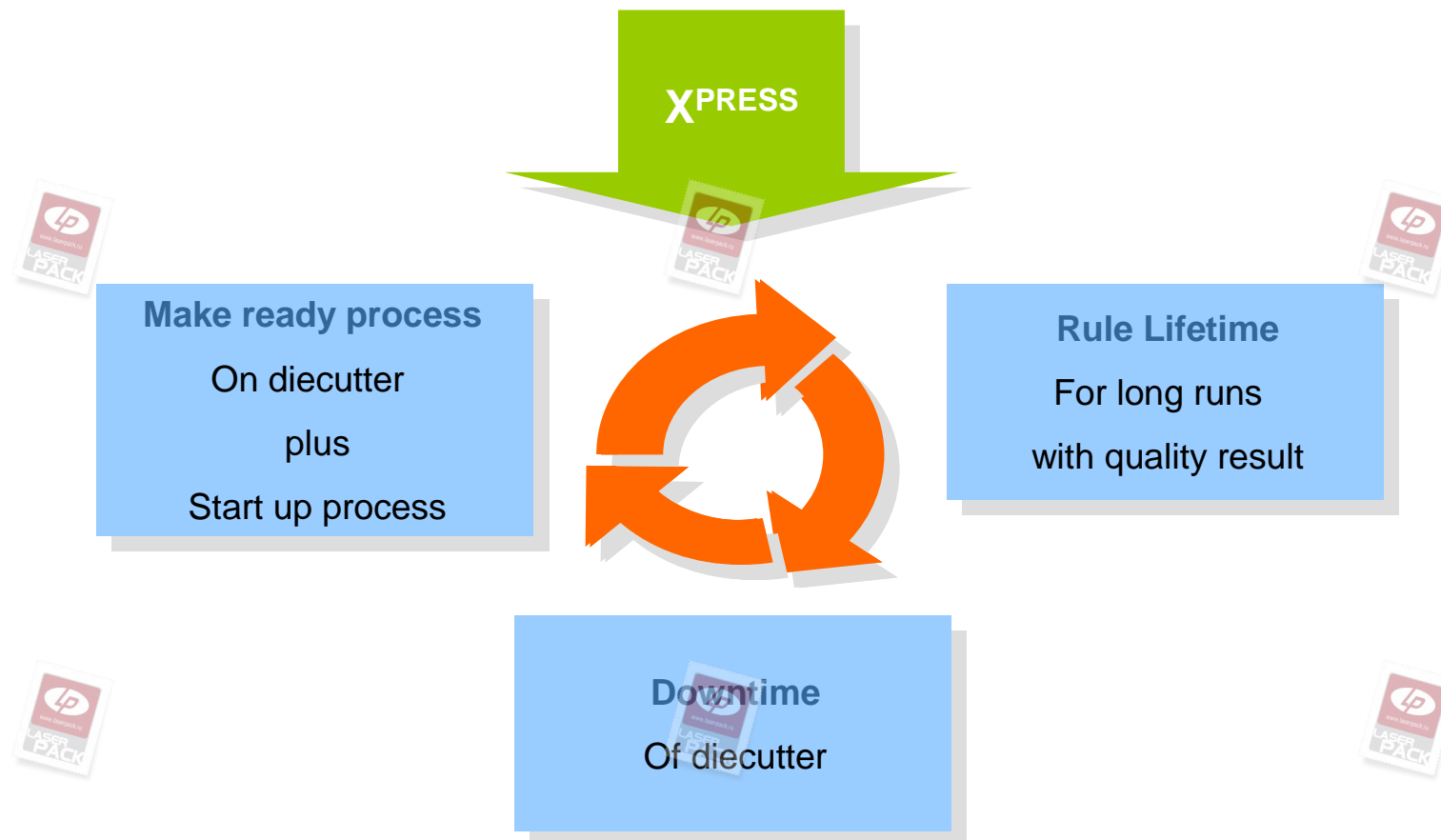


## Negative cost impact :

- Unprecise make-ready process leads to increased cutting rule wear
- Fast cutting rule wear → quicker die wear → frequent patching required
- More patching reduces diecutter productivity .....

With X<sup>PRESS</sup> cutting rule we help optimizing make ready time for dies and diecutter downtime.  
Consequently we help our customers to **REDUCE COST!**

For the first time ever in the history of flatbed diecutting, we achieve a significant reduction in make ready time without negative impact on the cutting rule lifetime.





Böhler-Uddeholm precision *strip*

**X<sup>PRESS</sup>®**

The ‚self - levlling‘ cutting rule  
patented since 2008

X<sup>PRESS</sup> cutting rule is Böhler's latest contribution to cost saving initiatives in the diecutting industry.

- Innovative rule back design
- Standard cutting edge/bevel

During the start-up phase in the diecutter, the patented micro-serration on the rule back achieves the self-levelling effect of the cutting rules.

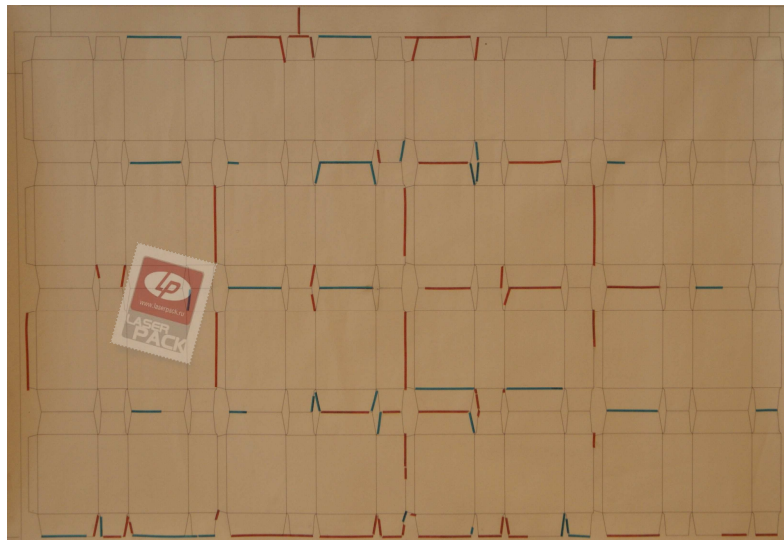
The rule back gets compressed through the application of the cutting force. Cutting rules are calibrated quickly by fractions of microns all across the die and achieve excellent cutting performance from the beginning.

- Numerous tests have proven high reduction in make ready time

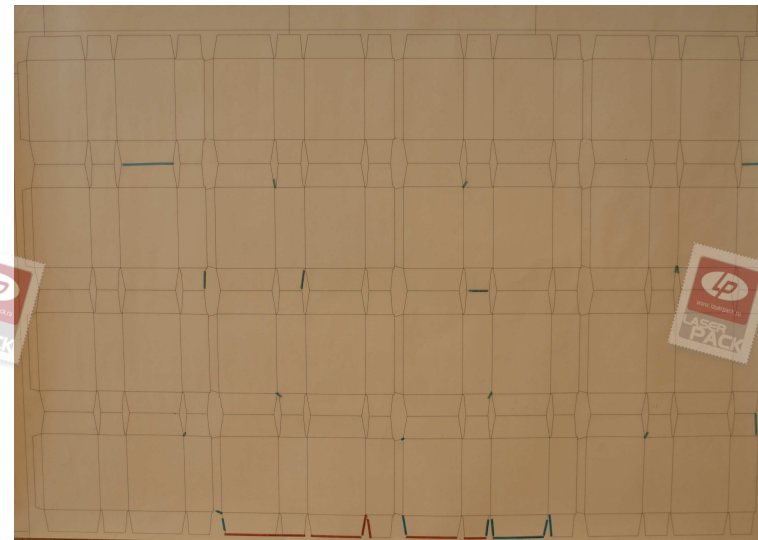


## Patching sheet – Reality Check

with standard CF- cutting rule



with X<sup>PRESS</sup> cutting rule



### Diecutter:

- Heidelberg Dymatrix 16 Pro
- 16 ups

### Solid box board:

- Invercote G, 240 g/m<sup>2</sup>

### Rules in the die:

- 24 M Cutting rule (79 feet)
- 14.4 M Creasing rule (47 feet)
- 2.2 M Compensation rule (7 feet)

## Cost efficiency calculation

	Standard Die	X <sup>PRESS</sup> Die	
Machine hour cost: € 200,00			
No. of re-orders: 6			
Cutting rules in die: 26.2 meters 86 feet			
<b>Initial order</b>			
Extra cost for X <sup>PRESS</sup> rules	n.a.	~ € 50	
Time consumed	60 Mins	20 Mins	
Cost accumulated	€ 200	€ 117	- 42%
<b>Re-order</b>			
Time consumed	6 x 15 Mins	6 X 5 Mins	
Cost accumulated	€ 300	€ 100	- 67%
<b>Total cost</b>	<b>€ 500</b>	<b>€ 217</b>	<b>57%</b>

Extra cost for counterplates, chase plates, etc not included!

## Field Test Experiences

- Successful in 100+ dies in 15 locations
- Up to 40 re-orders with 1 set of knives on different diecutters
- Successfully tested with 1 - 60 up dies including embossing/perforating/scoring
- Constant & long lasting cut quality
- Diecutting performance (e.g. cigarette):  
5.2 M sheets - 1 set of knives - die still useable



## Success criteria

- Platen parallelism (with cutting force equally spread)
- (New)Medium hard counter plate ( ~ 35 HRC) recommended
- Chase plates in good condition
- Zone patching recommended
- Calibrated patching sheets recommended (0.1/ 0.14mm)
- Use increased cutting force for first make-ready step
- Use **Böhler-Uddeholm precision strip** creasing, perforating & scoring rules only (tolerances +0,00mm / -0,04mm)

## X<sup>PRESS</sup>

## Cutting Rule

## Key Facts

- Rule back is micro-serrated.
- Rule back is the „pre-programmed weak part“.
- Cutting edge has less pressure load  
(especially with idle strokes) → cutting rule lifetime increases.
- Cutting rules self level quickly under cutting pressure
- Less patching time needed.



## Converter Benefits

- Make ready time down → diecutter productivity up
- Excellent and constant cutting results at highest level
- Die lifetime improved
- Operator motivation up due to fewer/shorter make ready activities
- Interchangeability: X<sup>PRESS</sup> equipped dies usable on multiple diecutters





## Diemaker Benefits

- Standard rule processing possible
- All auto-processes still applicable (e.g. lipping, nicking)
- X<sup>PRESS</sup> helps diemakers to upgrade to high-end customer base
- Offer latest technology to converters



## Availability

- **UNIVERSAL CF .937 x 2pt**
- Other dimensions on request!
- In coils of 328 feet – 100 meters  
(clockwise/counter clockwise)
- In length of 1meter
- Delivery from stock in Austria





For more information please contact

### **Sales Steel Rules**

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