


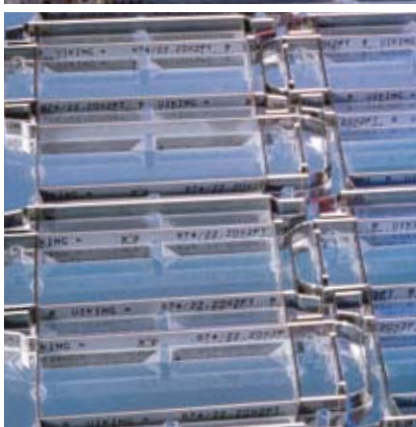
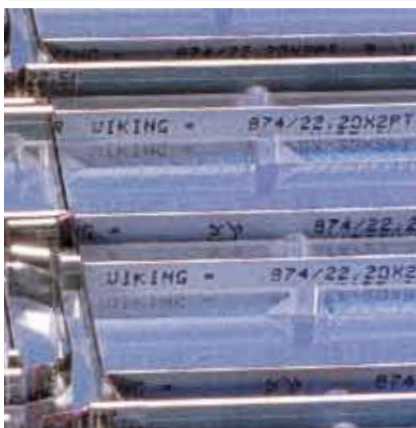


 VIKING<sup>®</sup> Steel Rules






## VIKING FLAT BED RULES

|   |   |    |
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## VIKING ROTARY RULES

|  |                          |    |
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| Hardness / Executions                    | Bevels                              | Edge Surface   | Edge Refinements   |
|--|-------------------------------------|--|--|
| VIKING MM<br>VIKING FLEX HF, HP, HP+     | A, AA<br>B, BB<br>Microtop          | shaved, ground (ES)<br>angular ground (F)<br>Reflexion (R) | Molykote<br>Tinit (TiN)  |
| Hardness / Executions                    | Profiles                            | Surface  |  |
| VIKING<br>VIKING HW<br>VIKING EH         | R, RD, FFD, FT<br>RR<br>RT, FRT, PT | shaved   |  |
| Hardness / Executions                    | Bevels                              | Edge Surface   | Execution  |
| VIKING MM, FLEX HP<br>VIKING MM, FLEX HF | A<br>A                              | shaved<br>shaved   | tooth/gap starting 2 pt / 2 pt<br>30 tpi, 40 tpi, 50 tpi, 70 tpi |
| VIKING MM                                | A                                   | shaved   | flat creasing part   |
| VIKING HW, MM                            | GK, FT, Needle Point                | cut edges (GK), shaved                                     | straight, waved, with teeth                                      |
| VIKING MM                                | A                                   | shaved   | spacing: 6 mm – 12 mm  |
| VIKING MM, FLEX HP                       | A, AA                               | shaved   | spacing: 2 mm – 10,0 mm  |

| Hardness / Executions           | Bevels  | Bevel Finish   | Execution     |
|---------------------------------|---|----------------|---------------|
| VIKING MM<br>VIKING FLEX HF, HP | A, AD, B, T<br>tooth shapes: ST, CC, RS, DC, FC | shaved, ground | 8, 10, 12 tpi |
| Hardness / Executions           | Profiles  | Finish         |               |
| VIKING<br>VIKING HW             | R<br>RT, FRT, PT                                | shaved         |               |
| Hardness / Executions           | Bevels  | Bevel Finish   | Execution     |
| VIKING MM                       | A, A/ST, AD/ST                                  | shaved, ground | 12 tpi        |
| VIKING MM                       | A, A/ST, AD/ST                                  | shaved, ground | 12 tpi        |



### Dimensions

#### Rule Thickness:

1,1 pt / 0,40 mm · 1,3 pt / 0,45 mm · 1,5 pt / 0,53 mm · **2 pt / 0,71 mm** ·  
**3 pt / 1,05 mm** · 4 pt / 1,42 mm · 6 pt / 2,13 mm · 8 pt / 2,84 mm

#### Rule Height:

7 mm · 8 mm · 10 mm · 12 – 100 mm

### VIKING FLEX HP



plasma hardened

### Edge-hardened Cutting Rules

#### HP – Properties:

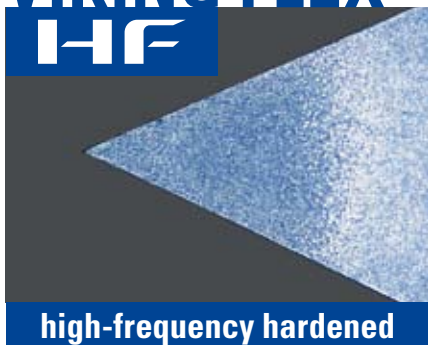
- Edge-hardened by special plasma hardening process
- Highest possible lifetime of the die, due to high cutting edge hardness of ~ 700 HV (~ 60 HRC)
- HP is unique to Martin Miller rules

Special execution: **HP+** even harder variant of the HP with ~ 900 HV (~ 67 HRC) edge hardness

#### HP – Application:

- For high to extremely high production runs / number of cuts
- Dust reduction in the cutting process
- Optimized for tight bends

### VIKING FLEX HF



high-frequency hardened

#### HF – Properties:

- Longer tool life due to induction-hardened cutting edge
- Lower body hardness, therefore, increased bendability compared to MM quality
- Multi-purpose usability

Special execution: **HFX**-quality cutting bevel which features a bright edge surface

#### HF – Application:

- Medium to high production runs / number of cuts
- Tight bends possible
- Reduces working tool wear, because of reduced body hardness

### VIKING MM



through-hardened

### Through-hardened Cutting Rules

#### MM – Properties:

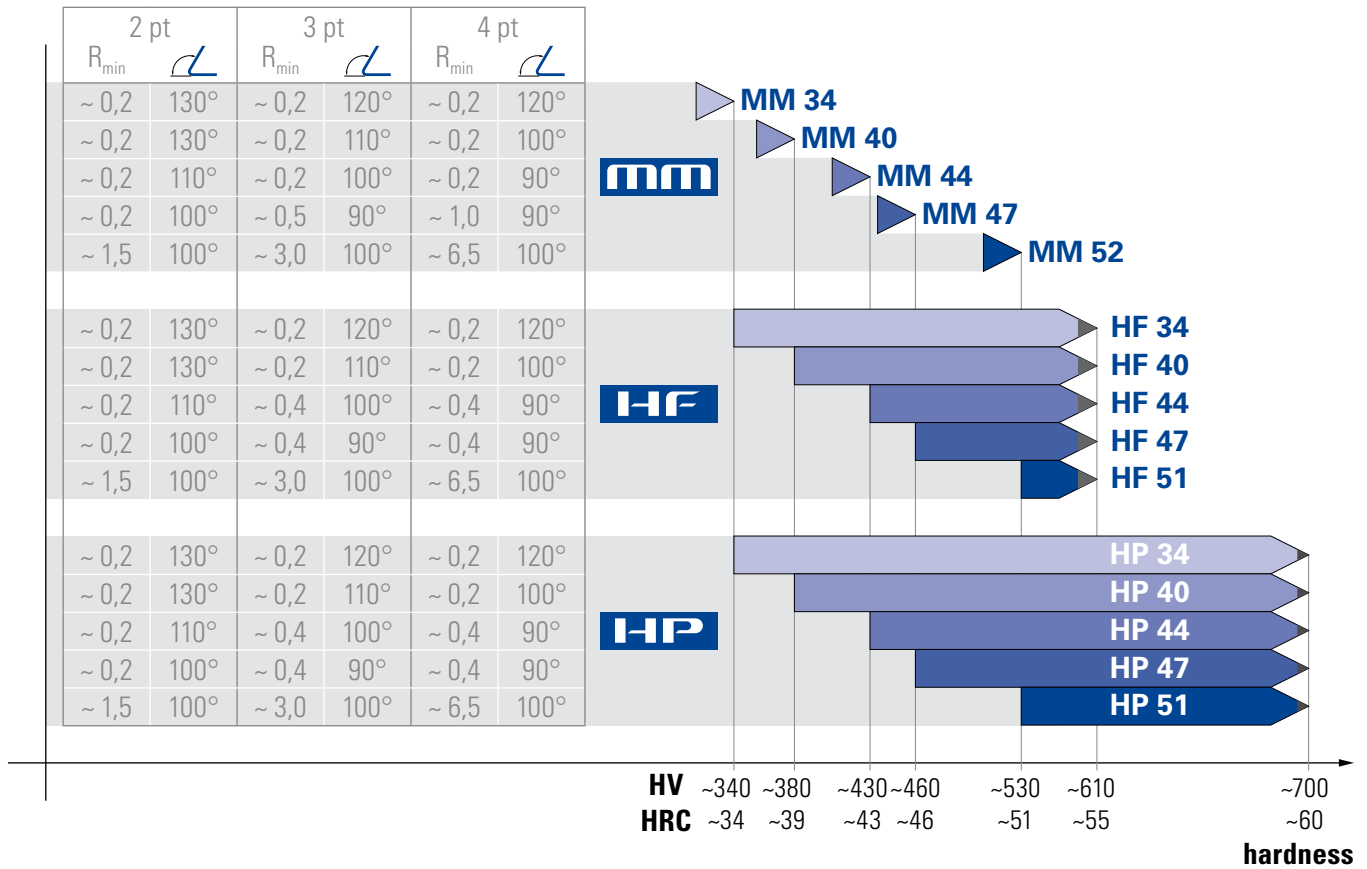
- The same hardness of cutting edge and body
- Good bendability due to soft and ductile surface layer

Special execution: **DUR47** (~ 480 HV / ~ 48 HRC) – no decarburized outer layer

#### MM – Application:

- Small to medium size runs / number of cuts
- Good bending properties
- All purpose rule (carton, corrugated)

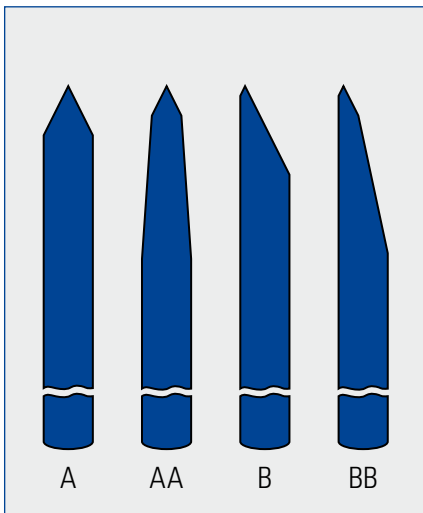
### Bendability / Hardness Scale



### Viking Flex HP 40+, HP 44+, HP 47+ and HP 51+:

Very high cutting edge hardness of ~ 900 HV (~ 67 HRC) through a special hardening process.

### Cutting Edge Geometry



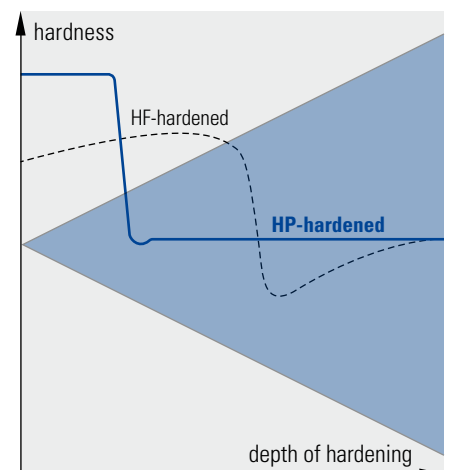
#### Bevels:

- A – Center bevel
- AA – Long center bevel
- B – Side bevel
- BB – Long side bevel

Standard angle of the bevel: 54°  
(for all bevel-types)

Other possible angles of the bevel:  
30° / 35° / 40° / 42° / 50° / 60°  
(A-bevel only)

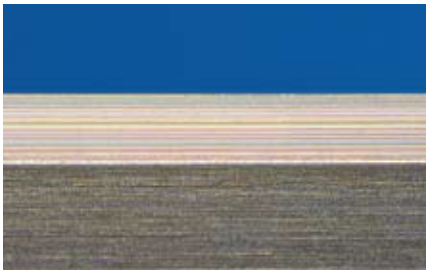
### Course of hardness – plasma- and induction hardened edge:





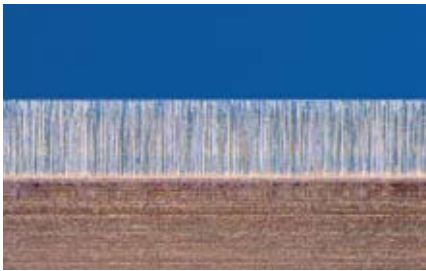
## Bevel Surfaces

### Shaved bevel (standard)



Martin Miller cutting rules have a shaved bevel surface as standard which offers a very high degree of accuracy and edge straightness as well as excellent bending properties.

### ExtraSharp ES bevel – rectangular ground



This rule offers good cutting results because of the micro-teeth on the bevel. For materials like plastics, rubber and laminates the ground execution has proven its highest efficiency.

The high sharpness and low friction reduce formation of dust and angel hairs.

In comparison to the shaved execution, ES has a slightly reduced bendability.

### StarCut F bevel – fine ground, angular



Martin Miller StarCut has the same cutting features as sharpened rules (ES) with the advantage of improved bendability properties.

StarCut offers best cutting results on coated boards, films as well as solid and corrugates board.

### Reflexion R – special bevel surface



Due to our latest manufacturing technology we are in the position to offer a very smooth bevel structure which greatly improves the bendability compared to rules with a sharpened cutting edge.

The rounded transition area between the bevel and the body also provides a better workability on all rule processing tools.

Reflexion is suitable for synthetic material as well as for paper.

### Optional Cutting Edge Refinements

#### Molykote Mo:

Based on a special coating process a thin molykote film adhere to the cutting bevel and fills the small pores providing a smooth edge surface.

Advantages are:

- Best suitability for self-adhesive materials
- Cutting with low formation of dust
- Minimisation of friction between the bevel and the material to be cut

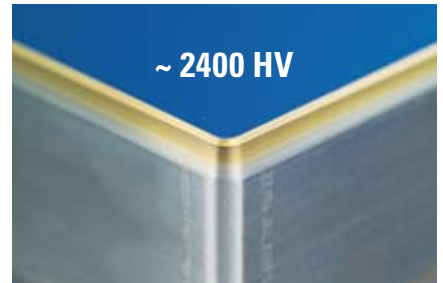


#### Tinit Ti:

The ~ 2400 HV hard Tinit-coating with only a thickness of ~ 0,002 mm on the hardened cutting bevel is our latest innovation. The bendability, structure and cutting edge geometry are the same as for edge hardend rules.

Special advantages are:

- Increased efficiency and cutting quality during the converting process
- Reduced tendency to cling to the cutting bevel by cutting adhesive materials
- Dust reduction and increased die life



### The Cutting Rule with more Power:

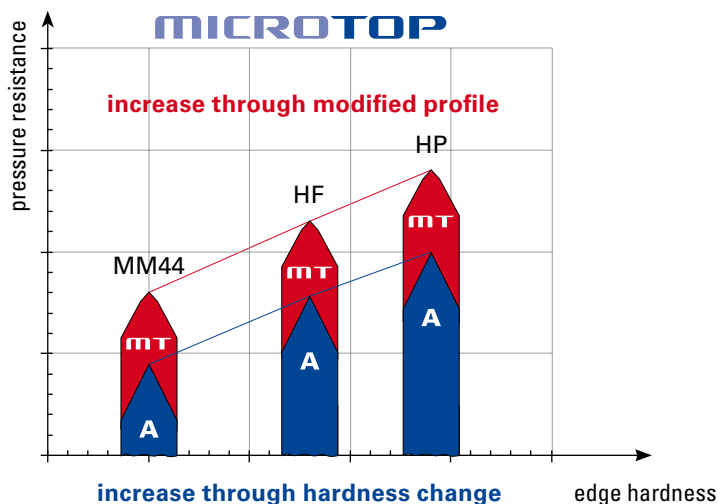
#### MICROTOP

#### Saving of make-ready time:

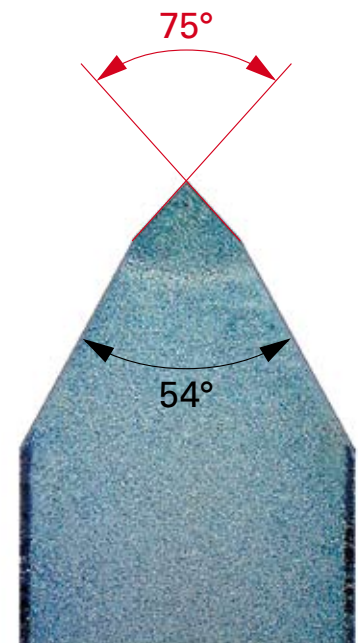
The cutting edge geometry is less sensitive to high cutting pressure which enables a fast and easy adjustment.

#### Longer lifetime:

The cutting results of our MicroTop cutting rules show a reduced tendency in creating angel hairs and dust. Even with very long runs the MicroTop offers the best cutting quality.



MicroTop – increase of pressure resistance through a profiled micro bevel



The comprehensive strength of the MicroTop rule is far higher in comparison to a rule with standard A-bevel. If the hardness of the bevel is the same, the rule stays longer in shape due to the higher pressure resistance through the unique bevel design.

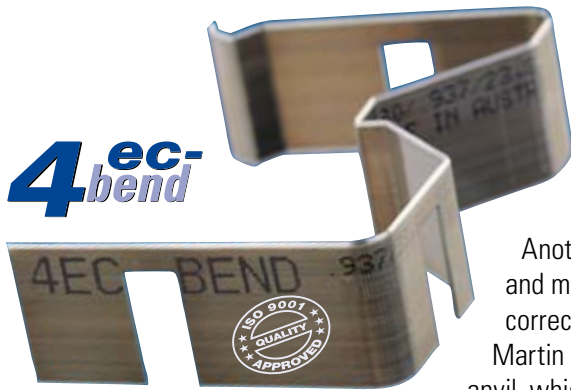


### Precision Cutting Rules

#### 4ec-bend:

The most important advantages of 4ec-bend cutting rules are the tight thickness tolerances, extraordinary straightness as well as a special accurate flatness.

Consequently due to these improved features, there is an undisturbed process on modern automatic cutting/bending machines. This again will bring you closer to your target of an economic and efficient die shop.



Another aspect is to guarantee tightest specifications concerning mechanical and metallurgic parameters, to optimise the bending properties for less corrections on your machinery after the first settings. As well as for every Martin Miller cutting rules the end of the 4ec-bend rule is cut off with a kind of anvil, which supports the bevel of the 4ec-bend rule. This prevents deformations and burrs on the cutting rule.

### Application Recommendation

| Application Criterion:          | Our Recommendation:            | Comments:                                 |
|---------------------------------|--------------------------------|---|
| close bends/tight bending angle | HP 34, HF 34, MM 34            | depending on the required production runs |
| highest bending consistency     | 4ec-bend                       | especially for automatic bending machines |
| longest life of cutting die     | Tinit                          | wear-resistant by hardcoating             |
| tightest height tolerances      | shaved finish Kiss-Cut         | in bars only                              |
| low dust formation              | Reflexion, Molykote            | reduced friction                          |
| reduced make-ready              | MicroTop                       | high resistance against overload          |
| highly abrasive material        | all HP+ rules                  | extra hard cutting edge                   |
| elastic material                | Reflexion, ExtraSharp, StarCut | depending on the bending requirements     |
| hard cutting material           | HP 44, HP 47, HP 51            | higher body stability                     |
| high/thick material             | AA bevel                       | low cutting pressure                      |
| stiff material                  | B, BB bevel                    | low deformation on the blank              |

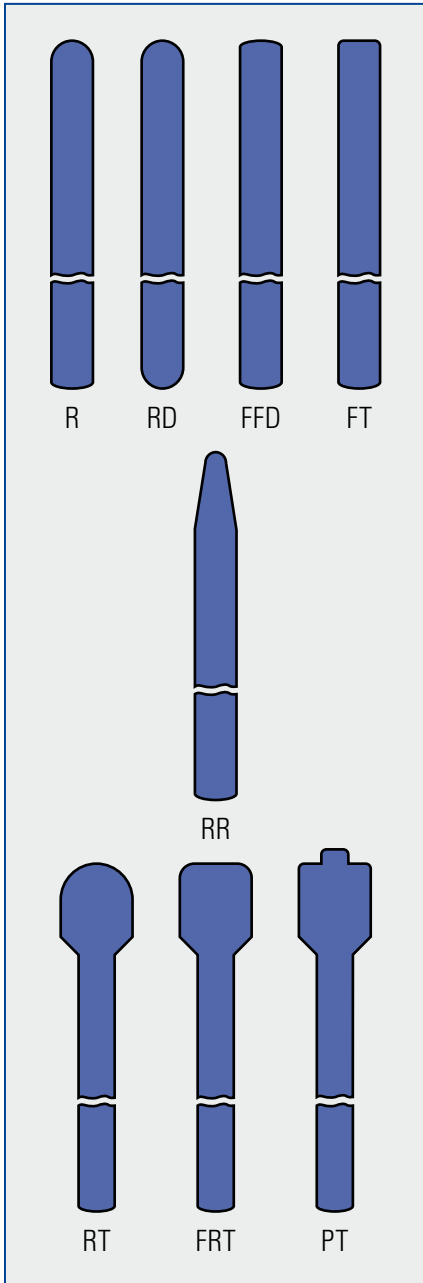
## VIKING Creasing Rules

### Product Range

- Viking** hardened and tempered creasing rule
- Viking HW** hardness is achieved through modern cold-rolling technology
- Viking EH** creasing rules with higher hardness for difficult materials to crease

### General

Only creasing rules with an exact profile geometry and tight height tolerances allow an excellent creasing result. Higher speeds are possible at automatic die cutting presses, also for challenging materials.



### Standard Creasing Rules:

| Execution | Viking HW  | Viking  | Viking EH | MMC *)   |
|-----------|--|---|-----------|----------|
| Hardness  | min. 270 HV  | ~ 370 HV ( $\leq 3$ pt)<br>~ 340 HV ( $> 3$ pt) | ~ 420 HV  | ~ 340 HV |
| Profile   | R, RD, FFD, FT   |   |           |          |
| Thickness | 1,5 pt / 0,53 mm – 6 pt / 2,13 mm  |   |           |          |
| Height    | 20,30 – 24,40 mm / 0.800" – 0.960"   |   |           |          |
| Comment   | *) <b>Precision Creasing rules MMC</b><br>for smoother running on automatic rule processing machines |   |           |          |

### Tapered Creasing Rules:

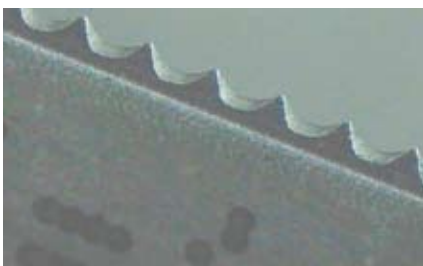
|           |                                    |
|-----------|------------------------------------|
| Execution | Viking                             |
| Hardness  | ~ 370 HV                           |
| Profile   | RR                                 |
| Thickness | 2/1 pt - 2/1,5 pt                  |
| Height    | 20,30 – 24,40 mm / 0.800" – 0.960" |

### Heavy Top Creasing Rules:

|           |  |
|-----------|--|
| Execution | Viking   |
| Hardness  | ~ 370 HV   |
| Profile   | RT, FRT, PT  |
| Thickness | 2/3 pt - 2/4 pt - 3/4 pt - 3/6 pt - 3/8 pt - 4/6 pt - 4/8 pt |
| Height    | 20,30 – 24,40 mm / 0.800" – 0.960"                           |

### Plastic Creasing Rules:

|           |   |
|-----------|---|
| Execution | Viking Flex 40 HP                       |
| Hardness  | ~ 380/700 HV                            |
| Bevel     | A (edge angle: 54°)                     |
| Thickness | 2 pt / 0,71 mm                          |
| Height    | 23,75/23,35 - 23,70/23,30 - 23,60/23,20 |
| Spacing   | 25 teeth per inch (tpi)                 |





## VIKING Special Rules



### Perforating Rules:



|                            |  |                   |
|----------------------------|--|-------------------|
| <b>Execution</b>           | Viking MM 44   | Viking Flex 40 HP |
| <b>Hardness</b>            | ~ 430 HV   | ~ 380/700 HV      |
| <b>Bevel</b>               | A (edge angle: 54°)  |                   |
| <b>Thickness</b>           | 2 pt / 0,71 mm · 3 pt / 1,05 mm · 4 pt / 1,42 mm                                     |                   |
| <b>Height</b>              | 21,30 – 25,40 mm / 0.840" – 1.000"   |                   |
| <b>Spacing (tooth/gap)</b> | all common tooth/gap-variations available (in millimeter-, point- and inch-spacings) |                   |

### Microperforating Rules:



|                  |  |                   |
|------------------|--|-------------------|
| <b>Execution</b> | Viking MM 44   | Viking Flex 40 HF |
| <b>Hardness</b>  | ~ 430 HV   | ~ 380/610 HV      |
| <b>Bevel</b>     | A (edge angle: 54°)  |                   |
| <b>Thickness</b> | 2 pt / 0,71 mm · 3 pt / 1,05 mm · 4 pt / 1,42 mm   |                   |
| <b>Height</b>    | 21,30 – 25,40 mm / 0.840" – 1.000"   |                   |
| <b>Spacing</b>   | 30 tpi (gap 0,42mm) · 40 tpi (gap 0,30 mm)<br>50 tpi (gap 0,25mm) · 70 tpi (gap 0,18 mm) |                   |

### Combination Cut/Crease Rules:



|                             |   |  |
|-----------------------------|---|--|
| <b>Execution</b>            | Viking MM 44  |  |
| <b>Hardness</b>             | ~ 430 HV  |  |
| <b>Bevel</b>                | A (edge angle: 54°)   |  |
| <b>Creasing part</b>        | flat punched  |  |
| <b>Thickness</b>            | 2 pt / 0,71 mm · 3 pt / 1,05 mm · 4 pt / 1,42 mm                              |  |
| <b>Height</b>               | 21,30 – 25,40 mm / 0.840" – 1.000"  |  |
| <b>Spacing (cut/crease)</b> | all common cut/crease-variations available (in millimeter- and inch-spacings) |  |

### Spacing Rules:



|                  |  |                      |
|------------------|--|----------------------|
| <b>Execution</b> | Viking   | Viking HW            |
| <b>Hardness</b>  | ~ 370 HV (≤ 3 pt)                                    | min. 270 HV (> 3 pt) |
| <b>Profile</b>   | GK (cut edges)                                       |                      |
| <b>Thickness</b> | ½ pt / 0,18 mm – 6 pt / 2,13 mm                      |                      |
| <b>Height</b>    | 14 – 18 mm   |                      |
| <b>Comment</b>   | standard heights for all common die boards available |                      |



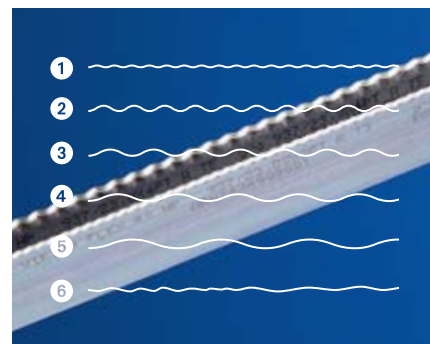
### Stripping Rules:

|                  |  |              |              |
|------------------|--|--------------|--------------|
| <b>Execution</b> | Viking HW  | Viking MM 34 | Viking MM 40 |
| <b>Hardness</b>  | min. 270 HV  | ~ 340 HV     | ~ 380 HV     |
| <b>Bevel</b>     | GK (cut edges), FT (shaved), Needle Point (with teeth)   |              |              |
| <b>Thickness</b> | 3 pt / 1,05 mm   |              |              |
| <b>Height</b>    | 45 mm / 50 mm / 55 mm / 65 mm  |              |              |
| <b>Spacing</b>   | <b>1</b> waved: 6:2 mm · 6:2,5 mm · 6:3 mm · 8:3 mm · 10:4,5 mm · 12:6 mm<br><b>2</b> Needle Point: spacing: 5 mm · 6 mm, tooth depth: 0,5 mm · 1 mm |              |              |



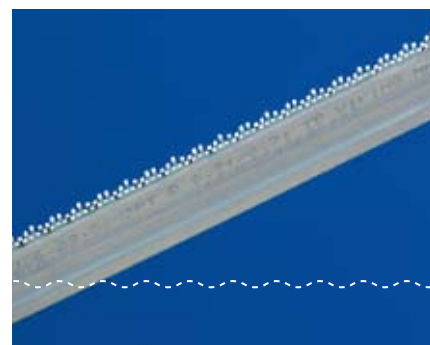
### Wave Edge Rules:

|                  |   |                   |
|------------------|---|-------------------|
| <b>Execution</b> | Viking MM 40  | Viking Flex 40 HP |
| <b>Hardness</b>  | ~ 380 HV  | ~ 380/700 HV      |
| <b>Bevel</b>     | A, AA (edge angle: 54°)   |                   |
| <b>Thickness</b> | 2 pt / 0,71 mm · 3 pt / 1,05 mm   |                   |
| <b>Height</b>    | 21,30 – 25,40 mm / 0.840" – 1.000"  |                   |
| <b>Spacing</b>   | <b>1</b> 2 mm · 2,5 mm <b>2</b> 3 mm · 3,5 mm <b>3</b> 5 mm <b>4</b> 7 mm <b>5</b> 10 mm<br><b>6</b> irregular wave (deckle edge rules) |                   |



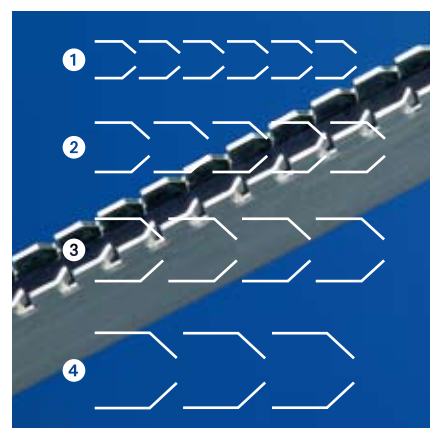
### Glue Flap Rules:

|                  |  |
|------------------|--|
| <b>Execution</b> | Viking MM 44   |
| <b>Hardness</b>  | ~ 430 HV   |
| <b>Bevel</b>     | A (edge angle: 54°)  |
| <b>Thickness</b> | 2 pt / 0,71 mm   |
| <b>Height</b>    | 22,80 – 23,60 mm / 0.897" – 0.929"                                   |
| <b>Spacing</b>   | spacing (tooth/gap): 2 pt / 2 pt · 1 mm / 1 mm<br>wave spacing: 5 mm |



### Zipper Rules:

|                  |   |
|------------------|---|
| <b>Execution</b> | Viking MM 34  |
| <b>Hardness</b>  | ~ 340 HV  |
| <b>Bevel</b>     | A (edge angle: 54°)   |
| <b>Thickness</b> | 2 pt / 0,71 mm · 3 pt / 1,05 mm   |
| <b>Height</b>    | 21,30 – 25,40 mm / 0.840" – 1.000"  |
| <b>Spacing</b>   | <b>1</b> 6 mm <b>2</b> 8 mm <b>3</b> 10 mm <b>3</b> 12 mm<br>length straight – angled part: 3/5 – 2/5 |





## Quality Characteristics

### Dimension Tolerances

#### Thickness Tolerances:

| [pt] | Rule Thickness |        | Thickness Tolerance |           |
|------|----------------|--------|---------------------|-----------|
|      | [mm]           | [inch] | [mm]                | [inch]    |
| 1,1  | 0,40           | 0.016" | ± 0,015             | ± 0.0006" |
| 1,3  | 0,45           | 0.018" | ± 0,015             | ± 0.0006" |
| 1,4  | 0,50           | 0.020" | ± 0,015             | ± 0.0006" |
| 1,5  | 0,53           | 0.021" | ± 0,015             | ± 0.0006" |
| 2    | 0,71           | 0.028" | ± 0,015             | ± 0.0006" |
| 3    | 1,05           | 0.041" | ± 0,020             | ± 0.0008" |
| 4    | 1,42           | 0.056" | ± 0,020             | ± 0.0008" |
| 6    | 2,13           | 0.084" | ± 0,025             | ± 0.0010" |

#### Height Tolerances:

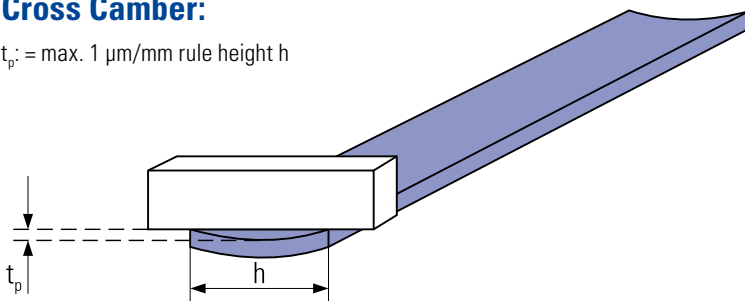
| Rule Height h                         |                   | Height Tolerance |                | Precision Tolerance (Kiss-Cut) |              |
|---------------------------------------|-------------------|------------------|----------------|--------------------------------|--------------|
| [mm]                                  | [inch]            | [mm]             | [inch]         | [mm]                           | [inch]       |
| 8,00 – 25,40                          | 0.315" – 1.000"   | ± 0,020          | ± 0.0008"      | ± 0,007 *)                     | ± 0.0003" *) |
| > 25,40 – 50,80                       | > 1.000" – 2.000" | ± 0,025          | ± 0.0010"      | —                              | —            |
| > 50,80 – 76,20                       | > 2.000" – 3.000" | ± 0,030          | ± 0.0012"      | —                              | —            |
| > 76,20 – 100,00                      | > 3.000" – 3.937" | ± 0,035          | ± 0.0014"      | —                              | —            |
| height tolerances for creasing rules: |                   |                  |                |                                |              |
| 20,30 – 24,40                         | 0.800" – 0.960"   | + 0 / -0,040     | + 0 / -0.0016" | —                              | —            |

\*) in cut lengths up to 1000 mm only

### Tolerances of Form

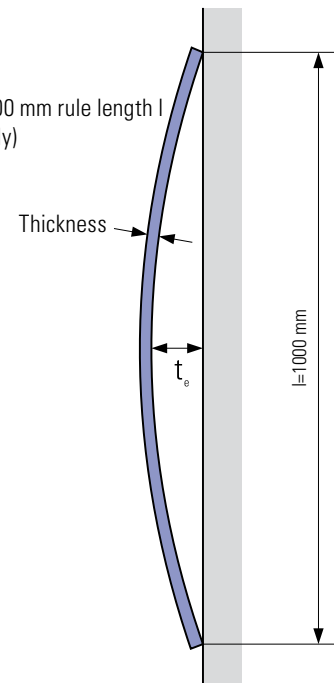
#### Cross Camber:

$t_p$ : = max. 1  $\mu\text{m}/\text{mm}$  rule height h



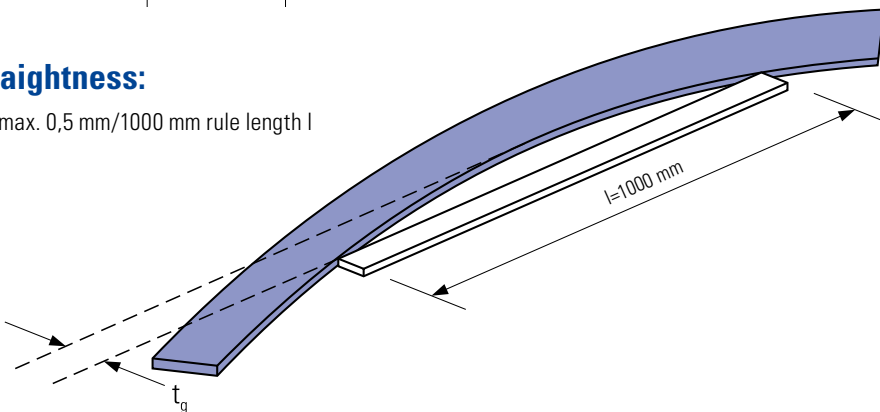
#### Flatness:

$t_e$ : = max. 5 mm/1000 mm rule length l (cut lengths only)



#### Straightness:

$t_g$ : = max. 0,5 mm/1000 mm rule length l



## Packaging Units and Forms of Delivery

### Packaging Units (rules cut to length)

#### All Types of Rule:

M = 1 m and 1,5 m lengths  
I = 762 mm (30") lengths

| [pt] | Rule Thickness |        | Packing units (in pieces) for heights of: |              |           |               |           |
|------|----------------|--------|---|--------------|-----------|---------------|-----------|
|      | [mm]           | [inch] | 6,35 – 27 mm                              | > 27 – 40 mm |           | > 40 – 100 mm |           |
|      |                |        |   | M            | I         | M             | I         |
| 1,3  | 0,45           | 0.018" | <b>150</b>                                |              |           |               |           |
| 1,4  | 0,50           | 0.020" | <b>140</b>                                |              |           |               |           |
| 1,5  | 0,53           | 0.021" | <b>140</b>                                |              |           |               |           |
| 2    | 0,71           | 0.028" | <b>100</b>                                | <b>35</b>    | <b>70</b> | <b>35</b>     |           |
| 3    | 1,05           | 0.041" | <b>70</b>                                 | <b>25</b>    | <b>50</b> | <b>25</b>     | <b>24</b> |
| 4    | 1,42           | 0.056" | <b>50</b>                                 | <b>17</b>    | <b>34</b> | <b>17</b>     | <b>16</b> |
| 6    | 2,13           | 0.084" | <b>30</b>                                 | <b>12</b>    | <b>24</b> |               | <b>12</b> |
| 8    | 2,84           | 0.056" | <b>25</b>                                 |              |           |               |           |

For heights 6,35 - 15 mm in coils and for all thicknesses the double quantity is in one packing unit.  
(Exceptions please see the following tables. For heavy top creasing rules the thickness of the top is essential.)

#### Wave Edge and Glue Flap Rules:

| [pt] | Rule Thickness |        | for Wave Spacing W of: |               |
|------|----------------|--------|------------------------|---------------|
|      | [mm]           | [inch] | 2 · 2,5 · 3 · 3,5 mm   | 5 · 7 · 10 mm |
| 2    | 0,71           | 0.028" | <b>100</b>             | <b>70</b>     |
| 3    | 1,05           | 0.041" | <b>60</b>              | <b>60</b>     |

#### Zipper Rules: packed in pairs

| [pt] | Rule Thickness |        | for Tooth Spacing A of: |                      |
|------|----------------|--------|-------------------------|----------------------|
|      | [mm]           | [inch] | 6 mm                    | 8 · 10 · 12 mm       |
| 2    | 0,71           | 0.028" | <b>60</b> (30 pairs)    | <b>40</b> (20 pairs) |
| 3    | 1,05           | 0.041" | <b>40</b> (20 pairs)    | <b>30</b> (15 pairs) |

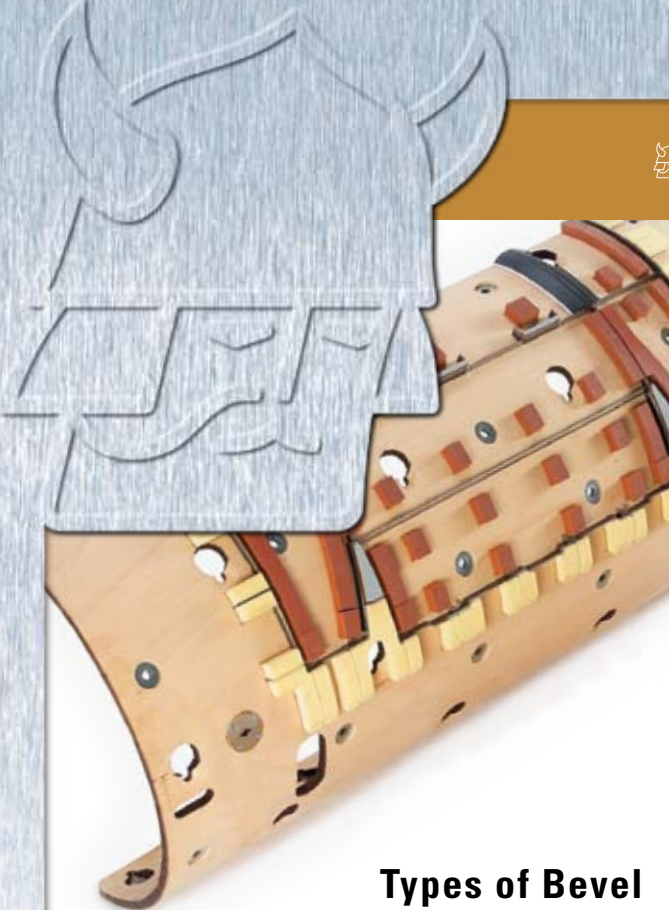
#### Stripping Rules, waved:

| [pt] | Rule Thickness |        | for Rule Height of: |            |
|------|----------------|--------|---------------------|------------|
|      | [mm]           | [inch] | 30 – 40 mm          | 45 – 50 mm |
| 3    | 1,05           | 0.041" | <b>40</b>           | <b>20</b>  |

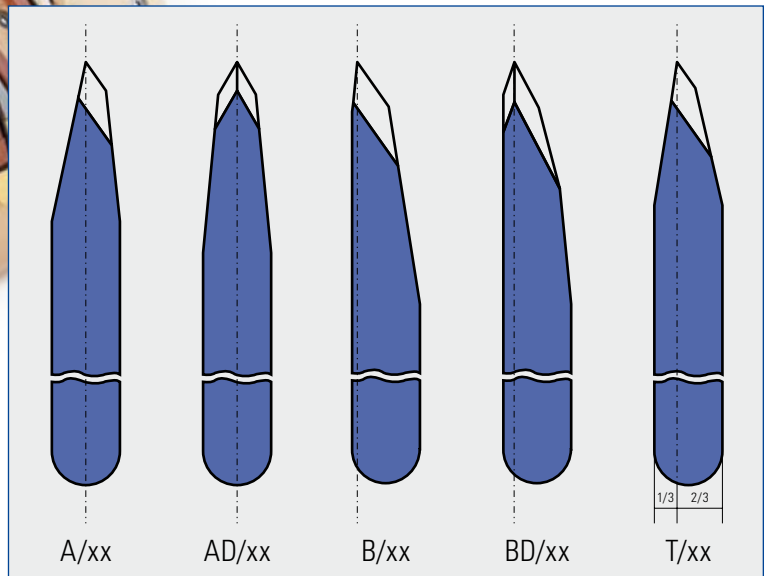
### Forms of Delivery

| Form of Delivery  |                                      | Standard   | Special  |
|-------------------|--------------------------------------|--|--|
| <b>in lengths</b> | rule length                          | 1 m / 762 mm (30")                                       | 1,5 m / 2 m or on request                        |
|                   | coil length                          | 2 pt – 100 m · 3 pt – 70 m · 4 pt – 50 m · 6 pt – 30 m   |  |
| <b>in coils</b>   | inner coil-Ø                         | 400 mm   | 356 · 460 · 521 mm                               |
|                   | winding direction<br>(view on bevel) | coil end on top left hand "⊖"<br>(RU: counter-clockwise) | coil end on top right hand "⊕"<br>(R: clockwise) |
|                   | marking of rule                      | inside the coil  | outside the coil                                 |





**Types of Bevel**



### Specification

| Execution    | Viking MM 34  | Viking MM 40 | Viking Flex 34 HF | Viking Flex 34 HP |
|--------------|---|--------------|-------------------|-------------------|
| Hardness     | ~ 340 HV  | ~ 380 HV     | ~ 340/610 HV      | ~ 340/700 HV      |
|              | through-hardened  |              | edge-hardened     |                   |
| Bevel Finish | ground teeth, long bevel shaved                         |              |                   |                   |
| Thickness    | 3 pt / 1,05 mm - <b>4 pt / 1,42 mm</b> - 6 pt / 2,13 mm |              |                   |                   |
| Height       | 21,30 – 26,70 mm / 0.840" – 1.050"                      |              |                   |                   |

Special execution Flex 34 HF: **Silverground** – bright tooth surface

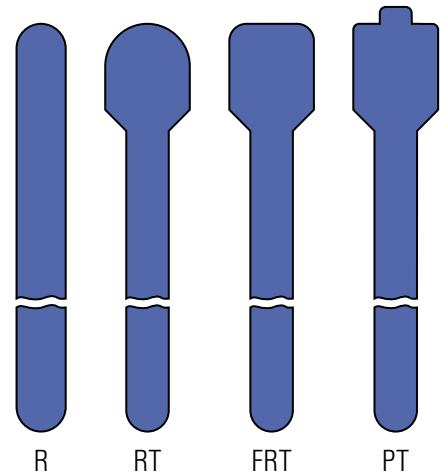
### Tooth Shapes

#### Tooth Shape (xx) · Profiles · Teeth/Inch

| <b>ST – Standard</b><br>pointed teeth<br>angular gullets |               | <b>CC – Clean Cut</b><br>pointed teeth<br>round gullets |               | <b>RS – Round Shape</b><br>sharp pointed teeth<br>round gullets |               | <b>DC – Double Cut</b><br>round teeth<br>round gullets |               | <b>FC – Fine Cut</b><br>shallow teeth<br>round gullets |     |
|--|---------------|---|---------------|---|---------------|--|---------------|--|-----|
|  |               |   |               |   |               |  |               |  |     |
| Profiles   | TPI           | Profiles  | TPI           | Profiles  | TPI           | Profiles   | TPI           | Profiles   | TPI |
| A/ST<br>AD/ST<br>B/ST                                    | 8<br>10<br>12 | A/CC  | 8<br>10<br>12 | A/RS<br>AD/RS<br>B/RS<br>BD/RS<br>T/RS                          | 8<br>10<br>12 | A/DC<br>AD/DC<br>B/DC                                  | 8<br>10<br>12 | A/FC<br>T/FC   | 14  |

## VIKING Rotary Creasing and Special Rules

### Types of Profile



### Rotary Creasing Rules

|                  |  |          |
|------------------|--|----------|
| <b>Execution</b> | Viking HW  | Viking   |
| <b>Hardness</b>  | min. 270 HV  | ~ 370 HV |
| <b>Profile</b>   | R, RT, FRT, PT   |          |
| <b>Thickness</b> | 3 pt / 1,05 mm · <b>4 pt / 1,42 mm</b> · 6 pt / 2,13 mm · 8 pt / 2,84 mm |          |
| <b>Height</b>    | 20,0 – 25,40 mm / 0.790" – 1.000"  |          |

### Rotary Perforating- and -Cut/Crease Rules

|                  |  |
|------------------|--|
| <b>Execution</b> | Viking MM 34   |
| <b>Hardness</b>  | ~ 340 HV   |
| <b>Bevels</b>    | A (shaved standard bevel)<br>A/ST, AD/ST, 12 tpi (ground teeth, long bevel shaved) |
| <b>Thickness</b> | 3 pt / 1,05 mm · <b>4 pt / 1,42 mm</b>   |
| <b>Height</b>    | 21,30 – 26,70 mm / 0.840" – 1.050"   |
| <b>Spacing</b>   | Rotary Perf: starting 3/3 mm, Rotary Cut/Crease: starting 10/10 mm                 |

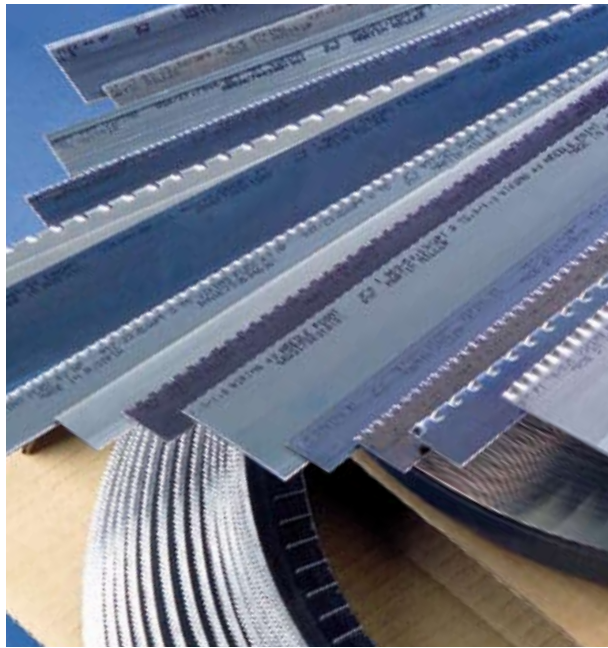


### Back Executions

| Back Execution   |                        |                      |                    |
|--|------------------------|----------------------|--------------------|
| SNN  | SN                     | CUR                  | CNN                |
| straight, no notches   | straight, with notches | curved, with notches | curved, no notches |
|  |                        |                      |                    |
| Standard depth of notches: 12,2 mm<br>Notch distance t = 12,7 mm – conical (CON)<br>Notch distance t = 10 mm – parallel (PAR)<br>Other depths of notches on request. |                        |                      |                    |

### Forms of Delivery

| Form of Delivery                            | SNN   | SN                        | CUR   | CNN                         |
|---|---|---------------------------|---|-----------------------------|
| <b>in lengths</b>                           |   |                           |   |                             |
| rule length                                 | 1 m / 762 mm (30")  | 1 m / 762 mm (30")        | –   | –                           |
| coil length                                 | 3 pt – 70 m · 4 pt – 50 m   | 3 pt – 70 m · 4 pt – 50 m | 4 pt – 30,5 m (100 ft)                                    | 4 pt – 30,5 m (100 ft)      |
| <b>in coils</b>                             |   |                           |   |                             |
| standard inner coil-Ø<br>(other on request) | 400 mm  | 400 mm                    | 487 mm<br>(257 mm – 664 mm)                               | 487 mm<br>(487 mm – 664 mm) |
| winding direction<br>(view on bevel)        | Standard (RU): coil end on top left hand "Ø"<br>Special (R): coil end on top right hand "6" |                           | Standard (N): counter-clockwise<br>Special (U): clockwise |                             |



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