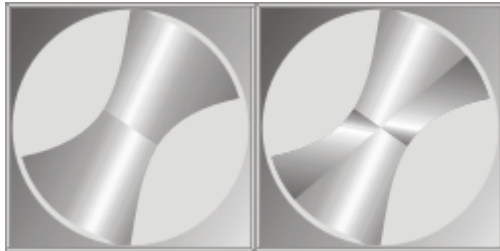


## 6.1 Standard Drills

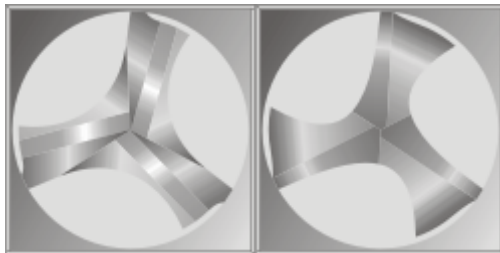
right helix/ right cutting

left helix/ left cutting work pieces



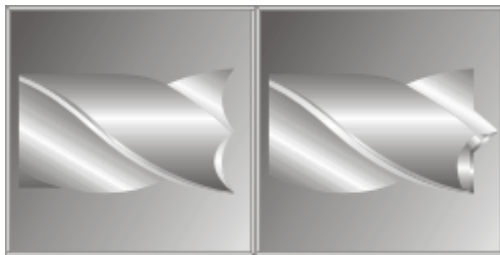
Standard

Split point



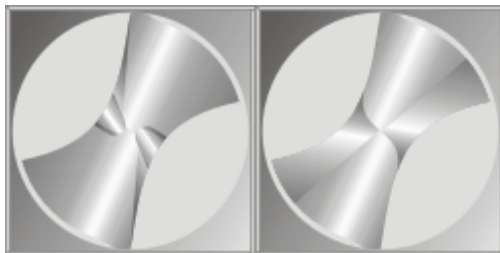
2-,4-,6- facet point

M-point

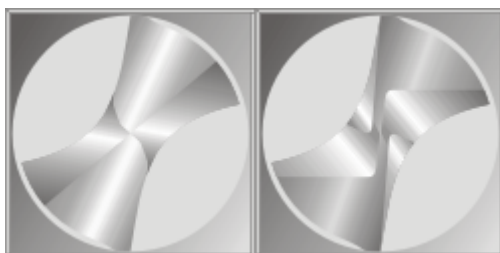


Kevlar point

Centring point

corr. main cutting edge/  
corr. chisel edge

S-web thinning



RGR-web thinning

A-web thinning

**Work Piece**

- 2 or 3 teeth
- 1 – 5 Steps

**Cutting Edge Combination:**

- right helix/right cut
- left helix/left cut

**Produktion / Regrinding**

- Production by different infeed (several steps)
- Regrinding with calculation of removal length, periphery and rake.
- Regrinding, finishing with different wheels

**Preparation:**

- Separation
- Profile roughing
- Profile finishing

**Point**

- Standard
- Split point
- 2-facet point
- 4-facet point
- 6-facet point
- Delta – point
- M – point
- Kevlar – point
- Centring point
- Milling end face

**2<sup>nd</sup> Chamfer**

- Optional: 2<sup>nd</sup> chamfer

**1<sup>st</sup> Web Thinning**

- Correction of main cutting edge
- Correction of chisel edge
- S-web thinning (incl. Sumitomo like)
- Free constructed notchings / corrections

**2<sup>nd</sup> Web Thinning**


- Correction of main cutting edge
- Correction of chisel edge

**Main Fluting**


- Meas. definition: Point-/ normal cut
- Grind. direction: Forward / backward
- Optional spark out grinding
- Separated fluting per step

**Periphery**

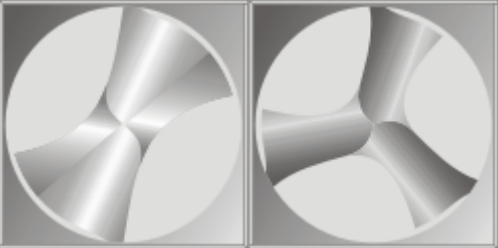
- Radial grinding / Round grinding
- Transverse/longitudinal positioning
- Linear relief: 1./2. relief angle

|   |   |
|---|---|
|  <p data-bbox="411 568 564 600">5-stepping drill</p> | <p data-bbox="807 264 884 295"><b>Steps</b></p> <ul data-bbox="823 304 1401 412" style="list-style-type: none"> <li>- Standard step (axial/radial relief angle)</li> <li>- Step aperture angle: 45 - 200°</li> <li>- Linear relief step (aperture angle <math>\geq 170^\circ</math>)</li> </ul> <p data-bbox="807 416 999 448"><b>Chip Breaker</b></p> <ul data-bbox="823 456 1254 488" style="list-style-type: none"> <li>- 1 or 2 chip breakers per tooth</li> </ul> <p data-bbox="807 492 960 524"><b>Simulation</b></p> <ul data-bbox="823 533 1279 667" style="list-style-type: none"> <li>- Simulation of intersection at all operations</li> <li>- Wheel/workpiece-simulation</li> <li>- Machining simulation</li> </ul> <p data-bbox="807 672 1347 703"><b>Production from standard- to step drill</b></p> <ul data-bbox="823 712 1353 779" style="list-style-type: none"> <li>- Special measurement and calculation program</li> </ul> |
|---|---|

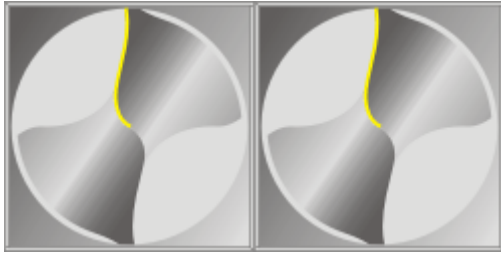
### 6.2 Subland Drills

|  |  |
|--|--|
|  | <p data-bbox="807 911 1037 943"><b>Extension to 6.1:</b></p> <p data-bbox="807 987 1311 1055"><b>Specification according to Standard- /Stepping Drills</b></p> <p data-bbox="807 1099 1062 1131"><b>Secondary Fluting</b></p> <ul data-bbox="823 1140 1302 1171" style="list-style-type: none"> <li>- Defined rotation against main fluting</li> </ul> |
|--|--|

### 6.3 S-Point

|   |   |
|---|---|
|  <p data-bbox="309 1514 395 1545">2-Teeth</p> <p data-bbox="580 1514 667 1545">3-Teeth</p> | <p data-bbox="807 1267 1037 1299"><b>Extension to 6.1:</b></p> <p data-bbox="807 1344 1062 1375"><b>S-point like Hertel</b></p> <ul data-bbox="823 1420 992 1451" style="list-style-type: none"> <li>- 2 and 3 teeth</li> </ul> |
|---|---|

#### 6.4 Chamfering Web Thinning

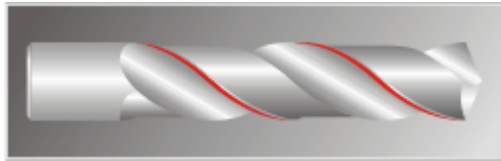


Chamfer of S- and RGR-Web Thinning

**Extension to 6.1:**

**Chamfering at cutting edge of S- and RGR-Web Thinning**

#### 6.5 Chamfering of the flute cutting edge



Chamfer of the flute cut

**Extension to 6.1:**

**Chamfering at cutting edge of flute:**

- Chamfer Angle
- Chamfer Width