



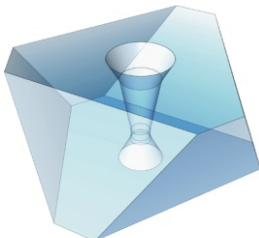
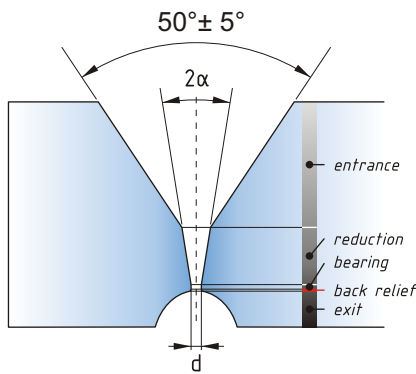
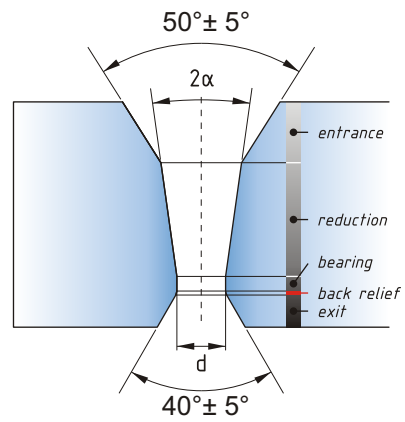
Single Crystal Diamond Dies

typical die geometries for various draw materials:

| wire material | diameter d [mm] | reduction angle 2α | bearing (%d) |
|-------------------------|-----------------|---------------------------|-----------------|
| copper | 0.035 - 0.45 | 18° - 20° | 30 - 40 |
| copper tinned | 0.1 - 0.45 | 16° - 18° | 30 |
| aluminium | 0.1 - 0.45 | 20° - 22° | 30 |
| stainless steel | 0.1 - 0.5 | 12° - 14° | 30 |
| stainless steel - tubes | 0.1 - 2 | 16° - 18° | 30 - 50 |
| molybdenum | 0.1 - 0.45 | 12° - 14° | 40 - 60 |
| tungsten | 0.1 - 0.45 | 12° - 14° | 40 - 60 |
| low-carbon steel | not recommended | not recommended | not recommended |

standard tolerance:

| d [mm] | tolerance in minus [μm] |
|--------------------------|-------------------------|
| up to 0.05 | 0.5 |
| 0.05 - 0.1 | 0.8 |
| 0.1 - 0.2 | 1 |
| 0.2 - 0.4 | 2 |
| 0.4 - 0.6 | 3 |
| 0.6 - 1.0 | 4 |
| > 1.0 | 5 |
| ovality 50% of tolerance | |

| crystal orientation - always $\langle 111 \rangle$ | dies d < 0.1 mm | dies d > 0.1 mm |
|---|--|---|
| <p><u>advantages:</u></p> <ul style="list-style-type: none"> - longest life time - best surface quality - best roundness - best heat distortion - regular wear  |  |  |