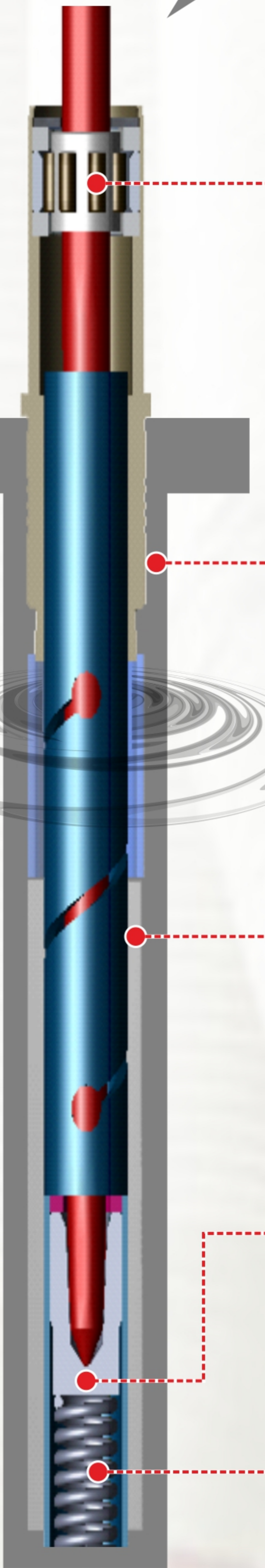


# Spindles for high speed

upto **25000** rpm  
(mechanical speed)

HF series  
of inserts



## Compact roller bearing at neck

- § Small wharve dia (18.5 mm)
- § Minimum clearance
- § Saves power

## Steel bolster

- § No chance of cracking of bolster
- § No blow holes ensures spindle remains lubricated
- § Quick heat dissipation extends relubrication cycle

## German oil spool

- § Dampens vibrations
- § Facilitates uniform and continuous lubrication

## Floating footstep with conical design

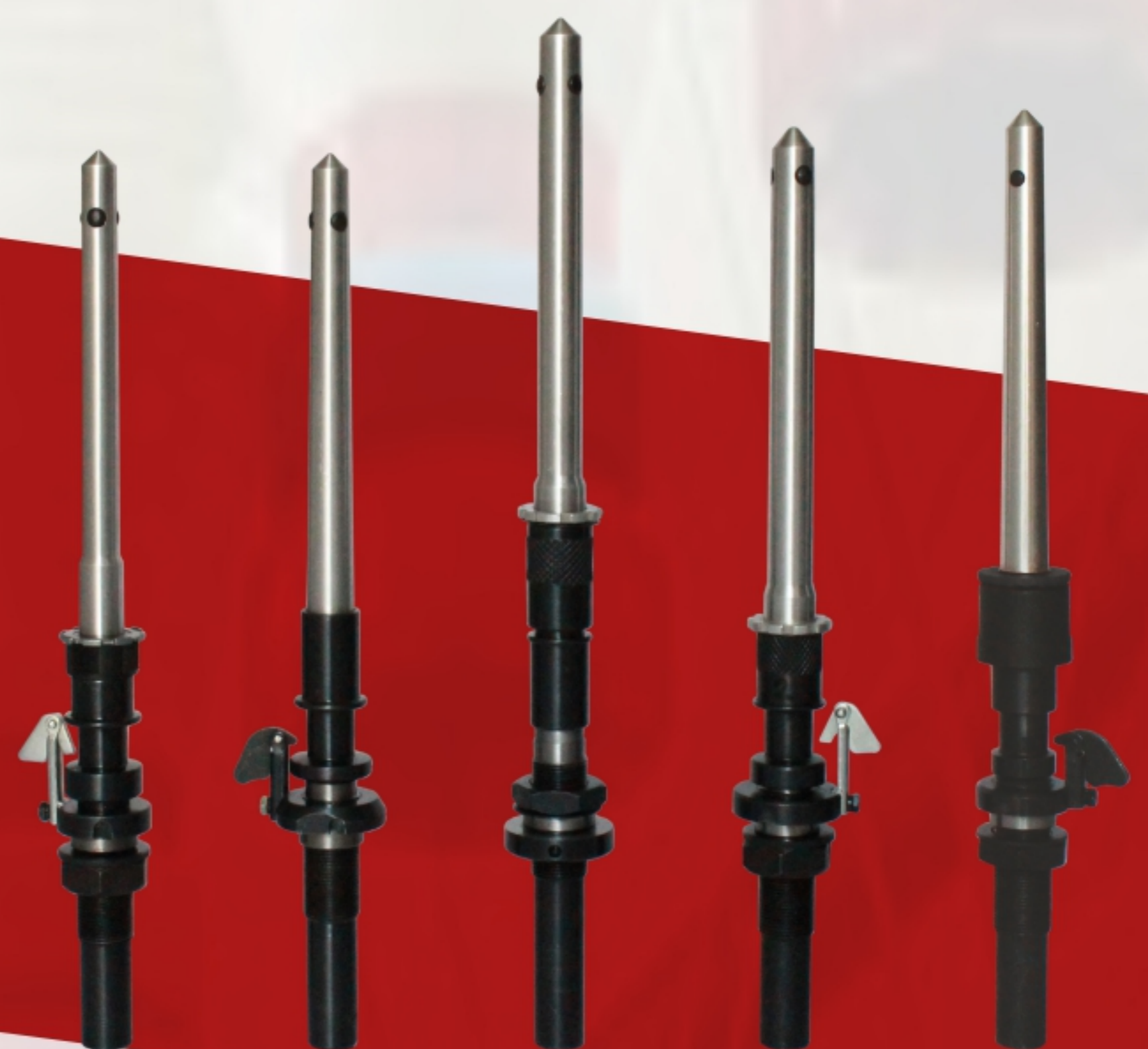
- § Minimum point contact of spindle blade tip with foot step bearing
- § Extremely low co-efficient of friction
- § Ensures continuous alignment of spindle top part axis with spindle insert axis

## Axial/buffer spring

- § Absorbs axial load and protects spindle blade tip

**10** million

spindles in operation  
across the globe



**SPEED • DURABILITY • RELIABILITY**