

## PLUNGERS

### Stepped Cylinders

#### Open & Ground Tolerances

Hyperion Materials & Technologies manufactures cemented carbide cylinders for use as plungers. They are available as stepped and non-stepped with or without center ends. We partner with our customers to design the cylinder and develop solutions for their applications.

#### Sizes

Outer Diameter ( $\Phi D$ ):  $\leq 115$  mm  
Length (L):  $\leq 370$  mm

#### As Sintered

Roughness Average (Ra): 3.2  
Tolerances:  $\geq \pm 1\%$

#### Standard Grades

Grades with hardness (HV30) from 900 to 2200  
Grade resistant to corrosion down to pH > 2

#### Options

Center ends: one or two; Minimum  $d = 1.2$  mm; Length =  $2.5 \times \Phi D$   
Ground Tolerances:  $\Phi D \geq \pm 0.006$  and  $L \geq \pm 0.06$   
Roughness Average (Ra):  $\geq 0.05$   
Transition steps

Additional sizes, tolerances, grades, and quantities (e.g., tests) are available upon request.

