

# FLECBON CORPORATION

## TYPES OF CARBON GRADES



**Metal graphites** - Mainly collection except for low voltage applications

Copper –

- Low voltage/collection of high current
- Surface speeds up to  $30\text{ms}^{-1}$
- Current densities 12 to  $30\text{Acm}^{-2}$

Silver –

- Low voltage with good signal integrity
- Surface speeds up to  $30\text{ms}^{-1}$
- Current densities vary from almost zero to  $30\text{Acm}^{-2}$

**Electrographites** - Commutation & Collection (Carbon partially transformed into graphite by heating to temperatures in the range  $2200^{\circ}\text{C}$  to  $2800^{\circ}\text{C}$ )

Common range of applications:

- DC drives, & AC rings, etc.
- Surface speeds up to  $50\text{ms}^{-1}$
- Current densities normally in the range 4 to  $16\text{Acm}^{-2}$

**Natural graphites** - Collection

- TA exciters with steel sliprings
- Surface speeds up to  $80\text{ms}^{-1}$
- Current densities up to  $12\text{Acm}^{-2}$

**Hard carbon & carbon graphites** - Commutation

- Older applications or Difficult commutation
- Surface speeds up to  $30\text{ms}^{-1}$
- Current densities up to  $10\text{Acm}^{-2}$

**Metal impregnated** - Commutation

- High strength/ high current requirements
- Surface speeds up to  $40\text{ms}^{-1}$
- Current densities up to  $30\text{A/cm}^{-2}$  Surface speeds up to  $40\text{ms}^{-1}$

**Resin bonded** - Commutation

- High contact drop (poor commutation) or low current/temperature applications
- Surface speeds up to  $30\text{ms}^{-1}$
- Current densities up to  $8\text{Acm}^{-2}$