

**Rd 20mm SAPHEI for Anti Material Rifle caliber**

Ref: Contract No A/18120/2017/20mm SAPHEI/INF/PPO-3 dated 24 Feb 2020.

<b>Sl No</b>	<b>Technical Parameters</b>	<b>Specified values</b>
(a)	Round Length (mm)	146.5 Max
(b)	Projectile Length (mm)	74.35 Max
(c)	Projectile dia (mm)	20.95 Max
(d)	Case Length (mm)	83.72
(e)	Mean corrected Velocity (VO)	720 $\pm$ 10m/s & SD-Not>10 m/s (at 21°C $\pm$ 2°C)
(f)	Mean Corrected pressure	Not>275 MPa & individual pressure Not>325 MPa (at $\pm$ 21°C $\pm$ 2°C)
(g)	Consistency	When fires in single shot, over a range of 200 meters, all the shot shall fall within a radius of 200mm.
(h)	Shot time (action time)	The individual shot time of round conditioned at $\pm$ 21°C $\pm$ 2°C shall not exceed 7 milliseconds
(j)	Fuze sensitivity	The fuze shall be activated by a 3mm thick steel plate at a range of 100 meters, angle of impact 90° (0° NATO).
(k)	Arming delay	The projectile must pass through a 3mm thick steel plate target placed at a distance of 8 meters from barrel without the fuze being activated.
(l)	Penetration	The projectile shall penetrate 15mm fixed armour plate with tensile strength of 1100 MPa at a range of 100 meters, angle of impact 90° (0° NATO).
(m)	Extraction of Projectile (Pull off)	The individual extraction value shall be between 3.5 KN and 8 KN.
(n)	Charge mass	No individual charge mass shall deviate by more than 0.2g from the adjusted charge mass.
(o)	Mass of projectile	The mass of projectile shall be 110 $\pm$ 3g.
(p)	Shelf Life	10 Years

**Environmental conditions/ climatic conditions**

- (i) Operating temperature for use - -20°C to 45°C
- (ii) Minimum temperature for storage - -40°C
- (iii) Maximum temperature for storage - +60°C, plus 1140 w/m square Solar Radiation equivalent plus 700.
- (iv) Maximum Relative Humidity - 95 %
- (v) Average Relative Humidity - 65 %
- (vi) Mean value of year's temperature - Not >32°C