Höganäs

Somaloy® Technology for Fast Switching Actuators & Pulse Transformers

Both fast switching actuators (e.g. solenoid valves in fuel injectors) and pulse transformers (e.g. ignition systems) operate in high and transient magnetic fields.

The unique combination of high magnetic saturation, fast response and 3D-shaping possibilities makes Somaloy the natural choice.

Somaloy 700 and 1000 materials have been specifically designed to meet the exacting demands on fuel injectors and ignition cores.

Use Somaloy features to create innovative, compact & high-performance systems.

Benefits

- Up to 50% faster actuation
- High performance and compact design due to unique material properties
- Cost-efficient component production

Recommended Materials for Fast Switching Actuators and Pulse Transformers

Four Somaloy grades are available in various formulations. The press-ready mixes combined with optimized processing result in components with different features. Due to optimized strength and permeability, the 3P performance level matches the requirements of high-performance ignition and injector applications.

1P
Baseline

3P
High strength
High permeability

Typical Data

Somaloy Material	Resistivity [μΩ.m]	TRS [MPa]	B@4000 A/m [T]	B@10000 A/m [T]	μ_{max}
Baseline					
1P Somaloy 500	70	50	1.26	1.51	500
1P Somaloy 700	400	40	1.31	1.56	540
High strength, high permeability					
3P Somaloy 700	200	125	1.37	1.61	750
3P Somaloy 1000	70	140	1.42	1.63	850

Magnetic properties measured on toroids (OD 55 ID 45 H 5 mm).