

**Starting Capacity**

Most popular direct injection diesel engine from 0.5 to 18 litres capacity, (from 0.5 lit/cyl. Single cylinder to 1.5 lit/cyl, max 12 cyl).

**Mounting/Pinion**

Flange range covers all of the SAE mounting flange configurations.

Most common module and fellow stub pinions are used on the starter range.

**Ranges**

Clock: Mini (SNC); Midi (SDC); Heavy Duty (SDCH); Maxi (SXC); H-Duty Maxi (SXCH); Super Maxi (SSXC)

Anti-Clock: Mini (SNA); Midi (SDA)

**Winding Handle Position**

42 possible positions at 8.5° increments

**Winding**

2 turns to engage drive pinion to flywheel then a further 8 (MINI) to 16 (SUPER MAXI) turns to fully wind. Average time to wind and trip 15 seconds. (NB. A starter may be left charged for up to one year without noticeable energy loss. The starter should not be left charged where it is used as a secondary standby system).

**Weight**

From 13.5kg/30lbs(MINI) to 26kg/57lbs(SUPER MAXI)

**Warranty**

"Exchange Starters" 12 Months parts and labour  
All other starters 24 months parts and labour unlimited starts

**Output**

	Max. Force	Energy (at pinion)
Mini:	91N	900Nm
Midi:	115N	1170Nm
Heavy Duty:	126N	1390Nm
Maxi:	126N	1730Nm
Heavy Duty Maxi:	147N	2230Nm
Super Maxi:	147N	2460Nm

**Starter Life**

For normal use: minimum of 5000 cycles, i.e. between three to five years of regular use. After this period some parts may require replacement.

As a stand-by secondary starter, (e.g. on generators, lifeboats) the starter life may be two to three times the normal.

**Applications Engines Include:**

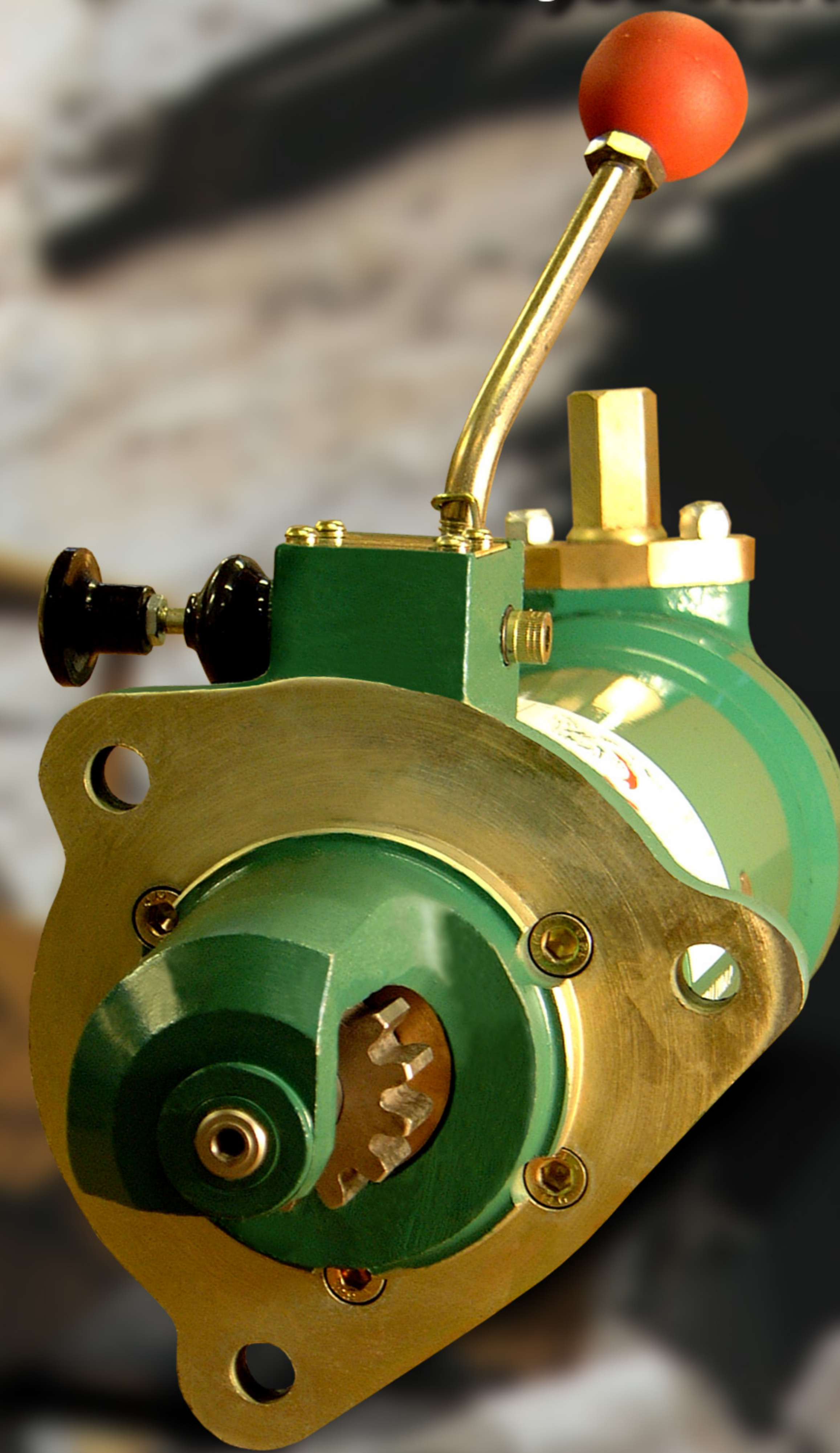
Alstom Diesel, Baudouin, Bedford / GM, Bukh, Caterpillar, Cummins, Detroit Diesel, Deutz, Dorman, Farymann, Fiat / Iveco Aifo, Ford, Hatz, John Deere, Kirloskar, Leyland, Liebherr, Lister, Lombardini, Mercedes Benz, MWM, Perkins, Ruggerini, Ruston-Hornsby, Same, Slanzi, VM, Valmet, Volvo, Yanmar ...

Please contact us for a full application list or see our website for more information.

**APPLICATIONS INCLUDE:  
EMERGENCY GENERATORS****PUMPS****COMPRESSORS****WELDING MACHINES****FARM EQUIPMENT****TRACTORS****DUMPERS****ROAD ROLLERS****CONCRETE CUTTERS****WORKBOATS****LIFEBOATS****CONCRETE MIXERS****VIBRATORS****UNDERGROUND LOCOMOTIVES****OIL RIG APPLICATION****REFINERIES****MILITARY EQUIPMENT**

# Startwell

## Gets you started

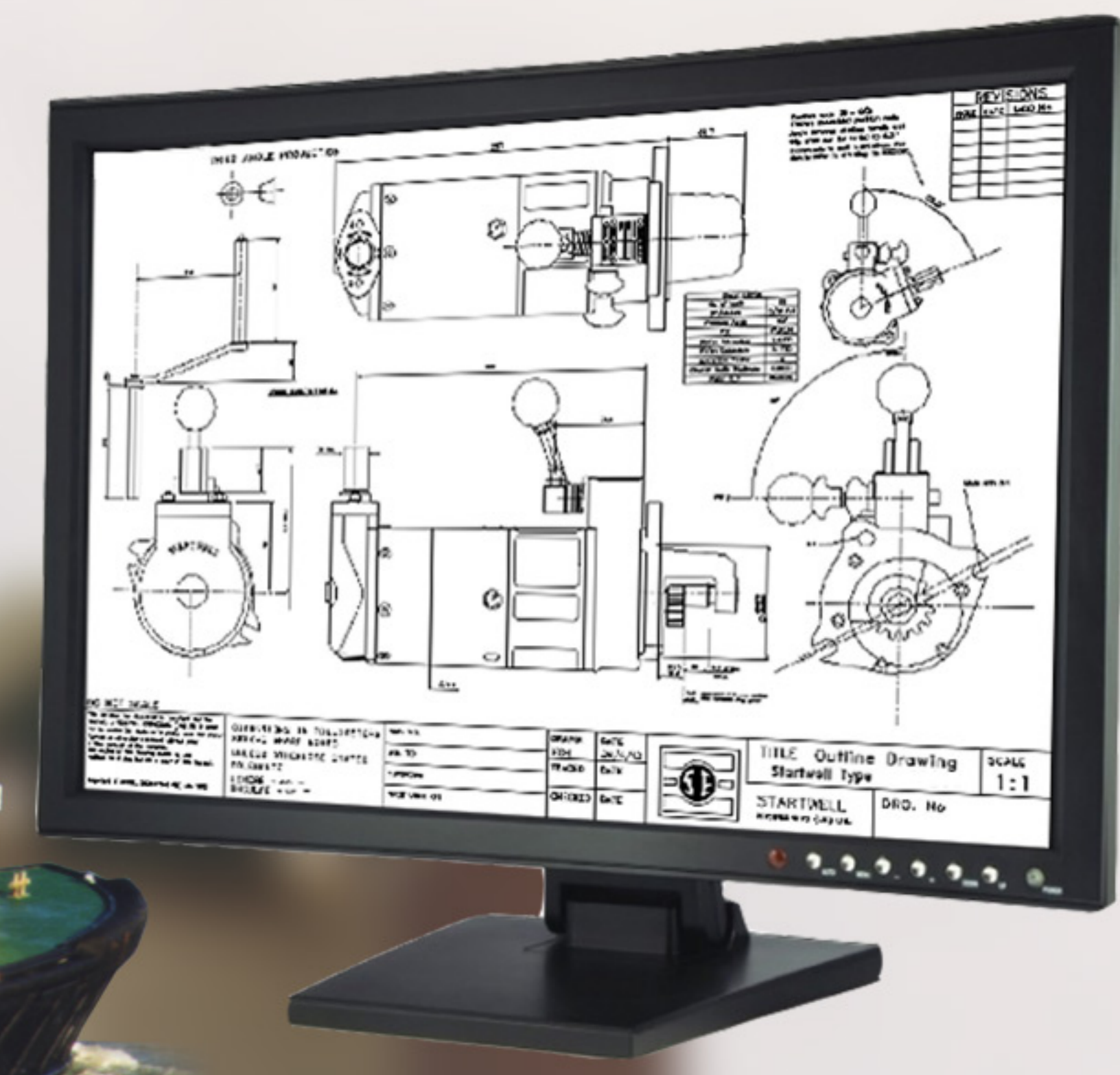
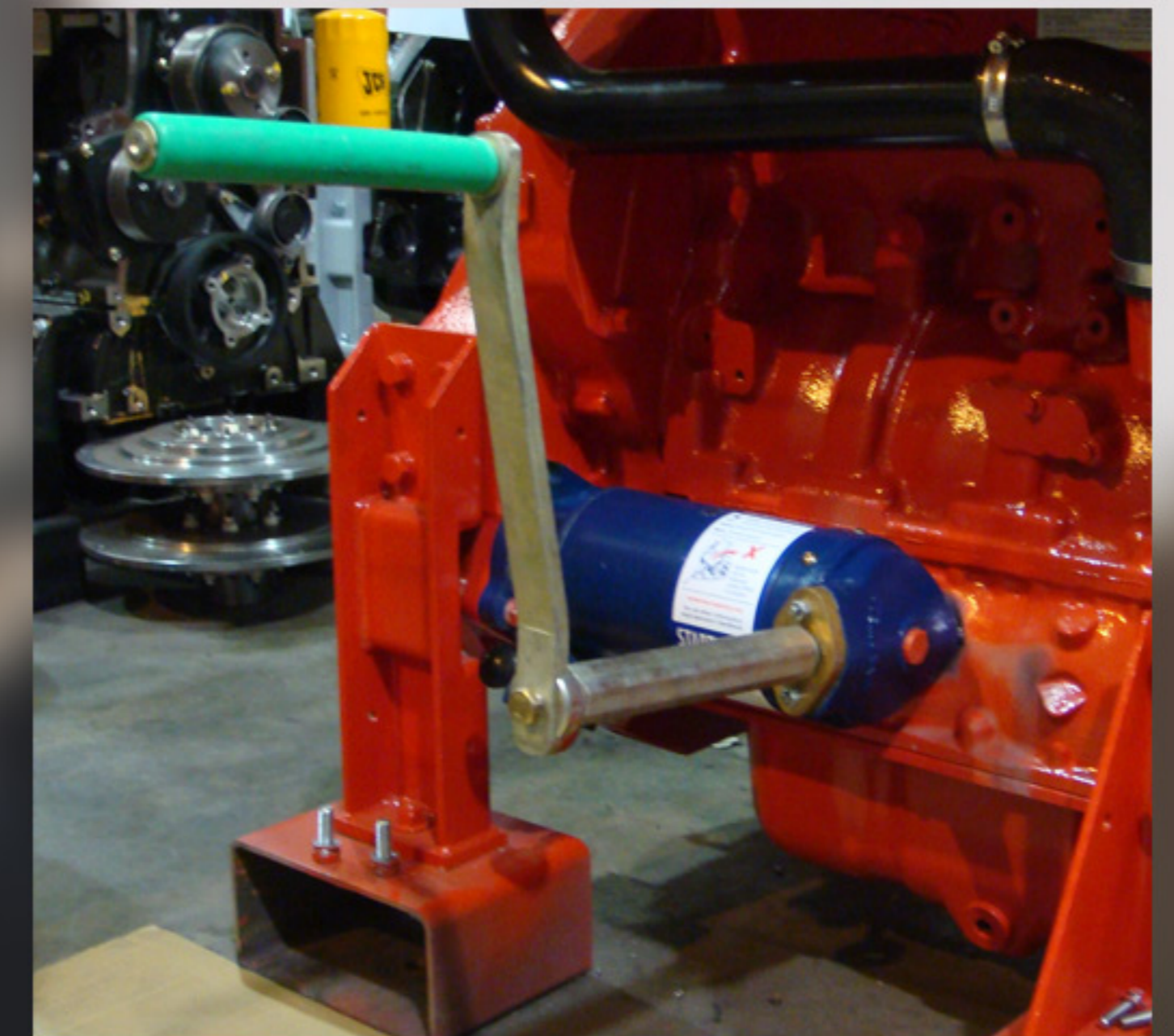
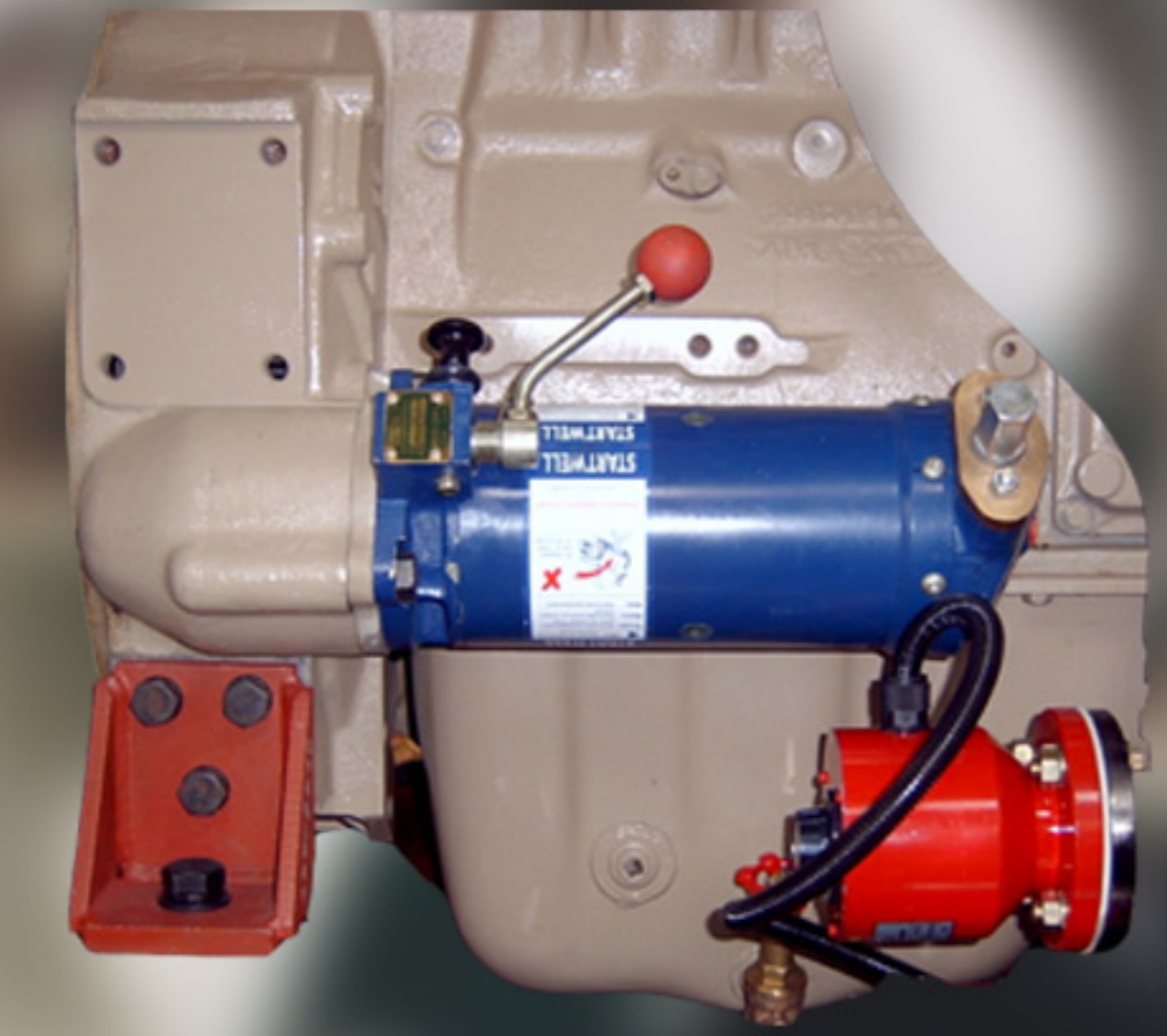
**Tel: +44 (0) 20 8863 4450****Fax: +44 (0) 20 8863 4410**

For further information see our website:

**[www.startwell.com](http://www.startwell.com)****Startwell Engineering (UK) Ltd.****5 The Crystal Centre,****Crystal Way,****Elmgrove Road,****Harrow, Middlesex****HA1 2HP, UK****In the remotest areas  
on the toughest terrains****where reliability is essential ...**

**Startwell Engineering is the leader in the field of non-electric mechanical starters for diesel engines. Our products are used worldwide in a myriad of different conditions on an ever-increasing range of applications. Our team offers a wealth of experience to provide you with the right solution.**

**We are committed to providing a highly cost effective solution to engine starting, while maintaining the highest standards in reliability and safety. We are constantly developing and improving our existing range of products while pushing forward with new starters for an ever wider variety of applications.**

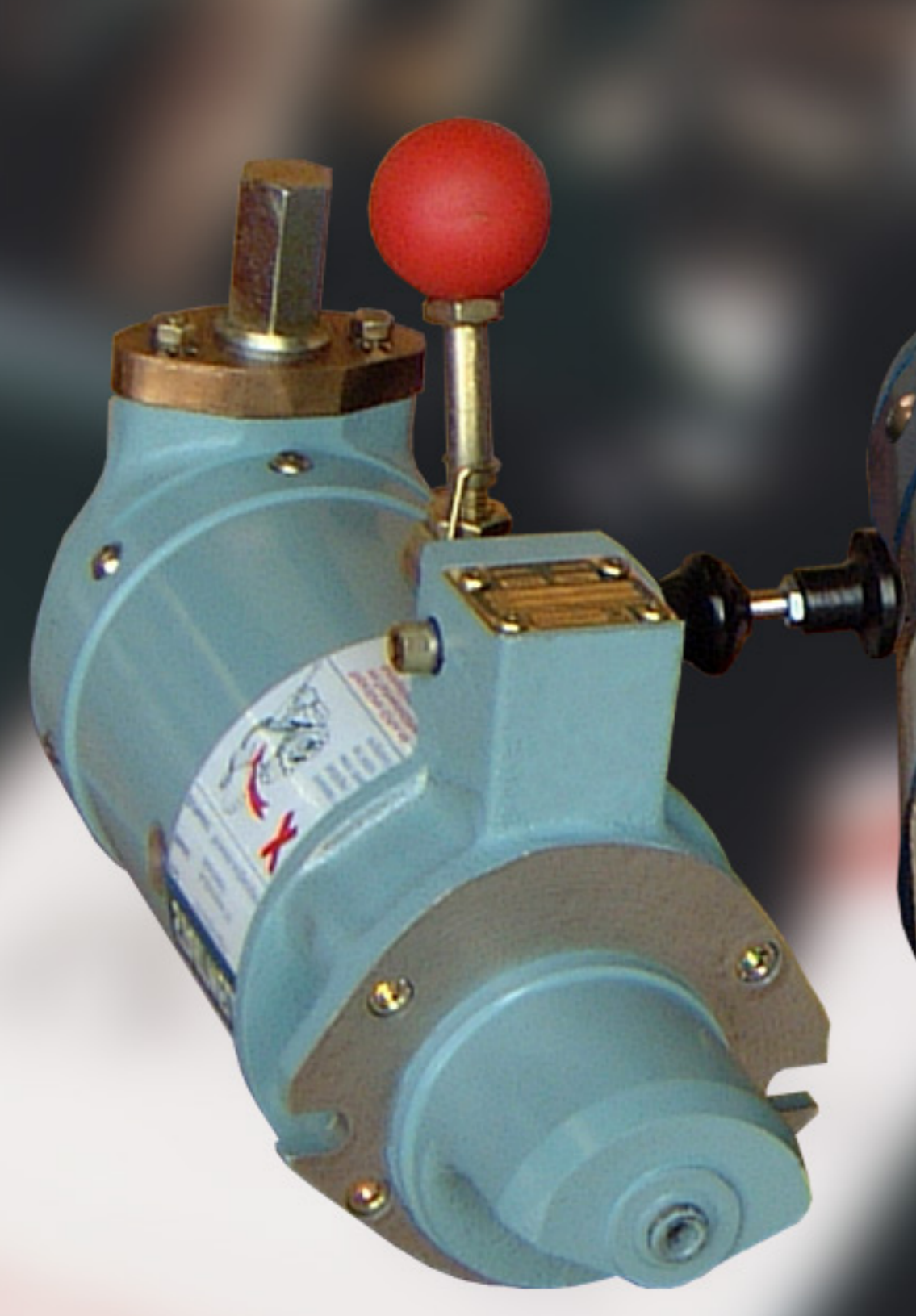


**Startwell Starters are totally self-contained, requiring only manual power for charging.**

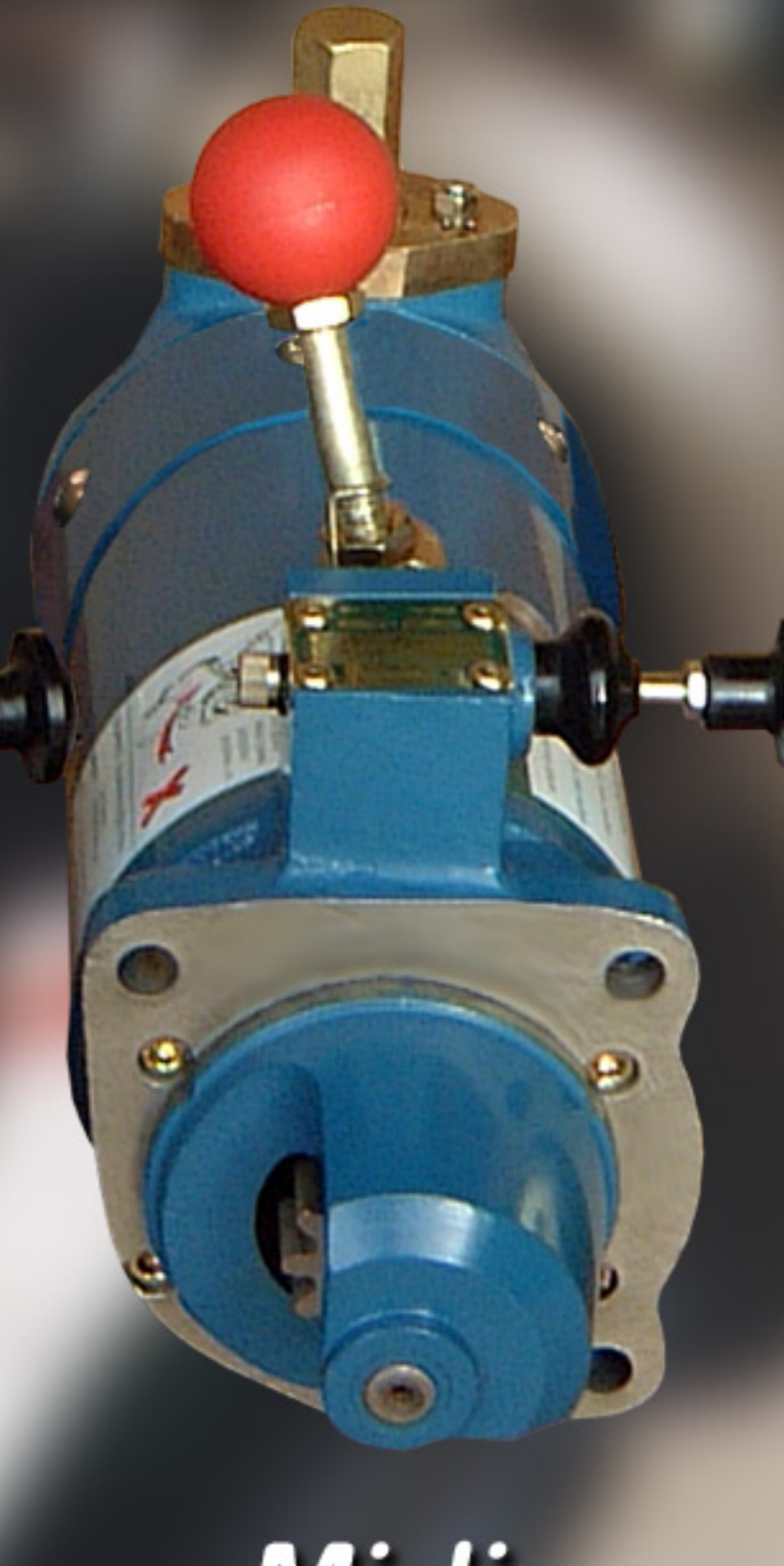
**They are a direct bolt-on replacement for electric, pneumatic or hydraulic starters on diesel engines. Unlike these systems, however, there is no need for expensive and bulky ancillary equipment (such as batteries and reservoirs).**

**Startwell starters are flameproof and spark-free. This makes them ideal for hazardous environments such as offshore rigs, chemical plants and mines, where a single spark could mean disaster.**

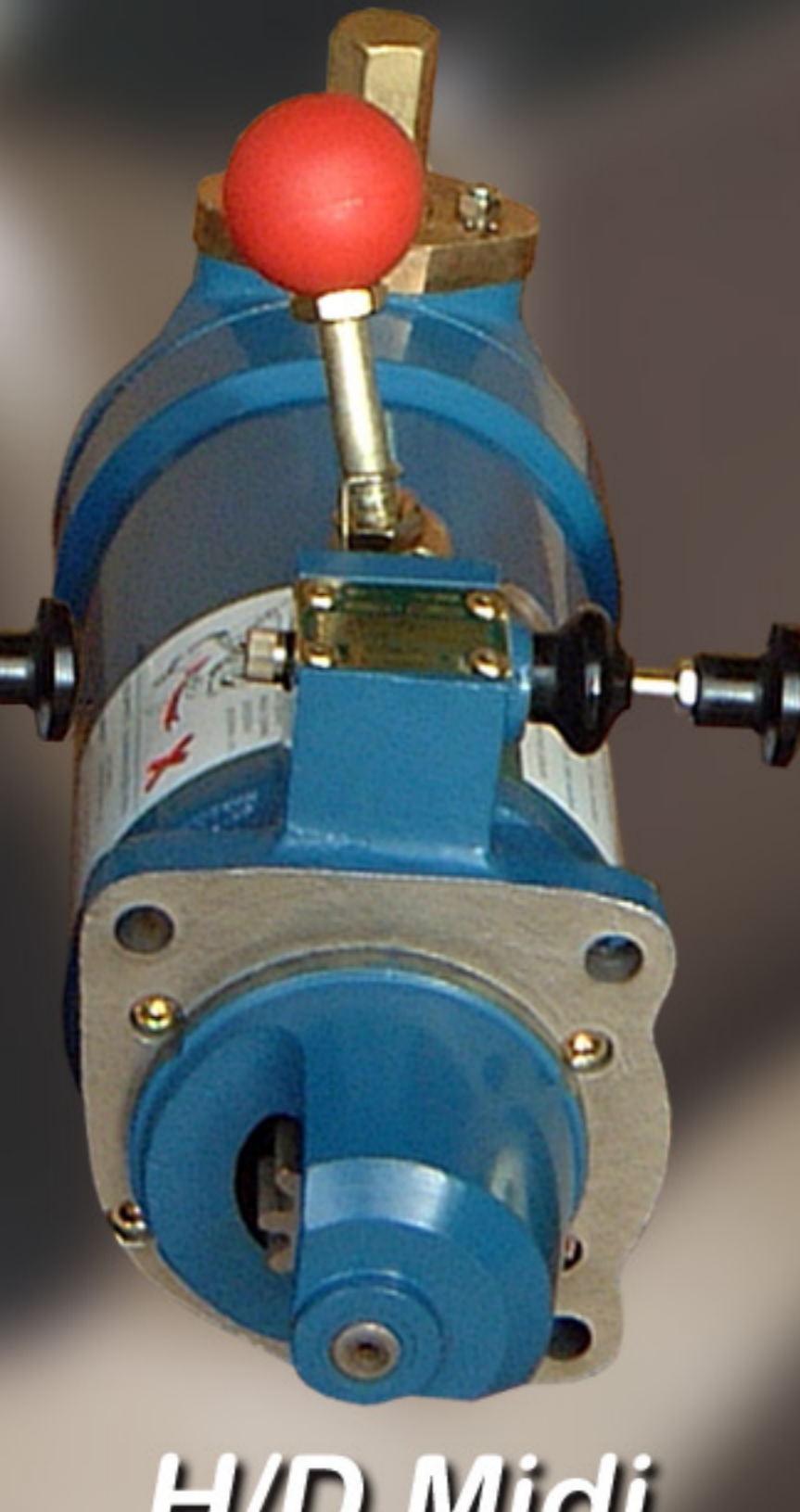
**In addition they are maintenance-free, simple to use and require no special skills or tools to install on an engine. They provide a fail-safe method in remote or harsh terrains, as either the primary or emergency starting device.**



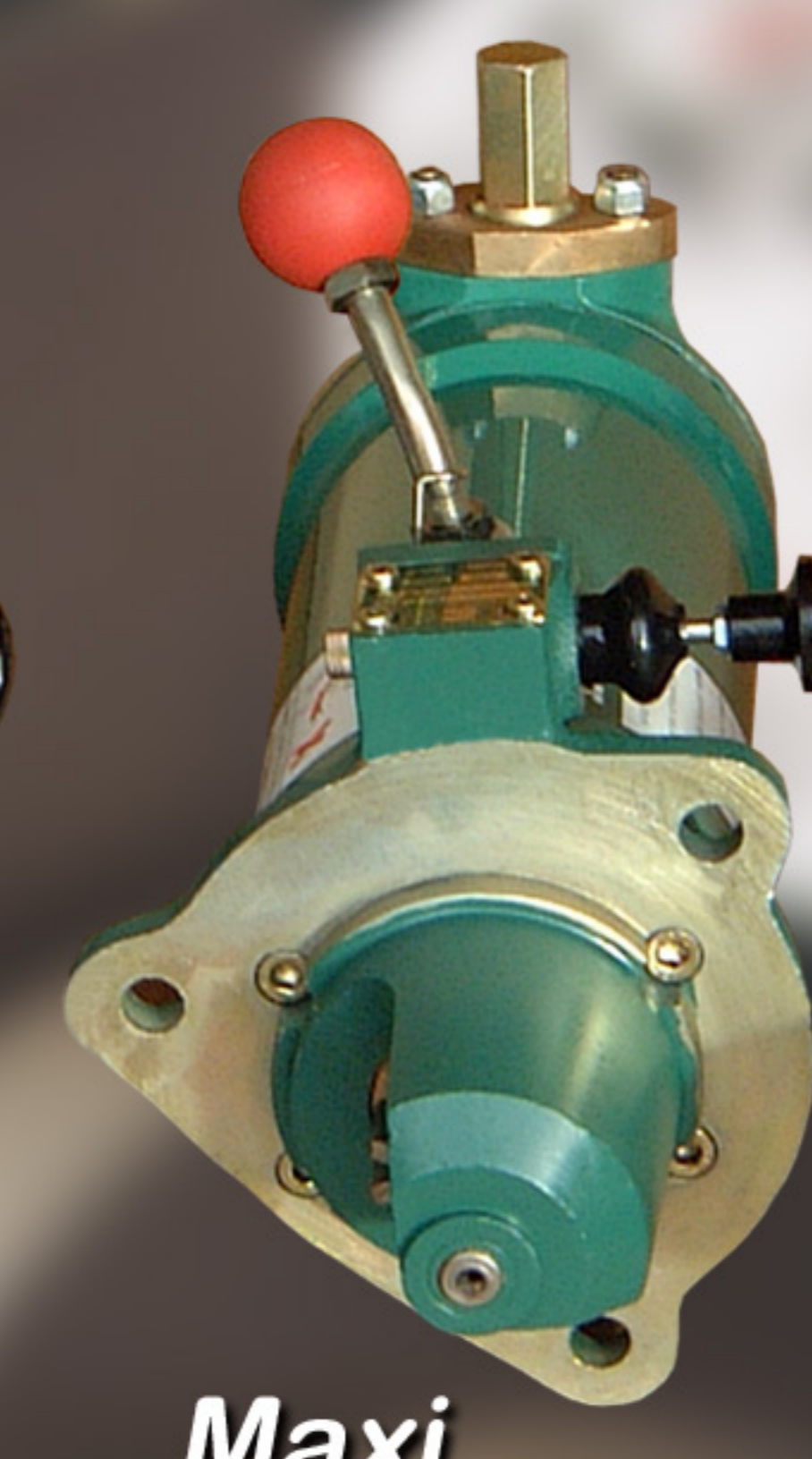
**Mini Starter**



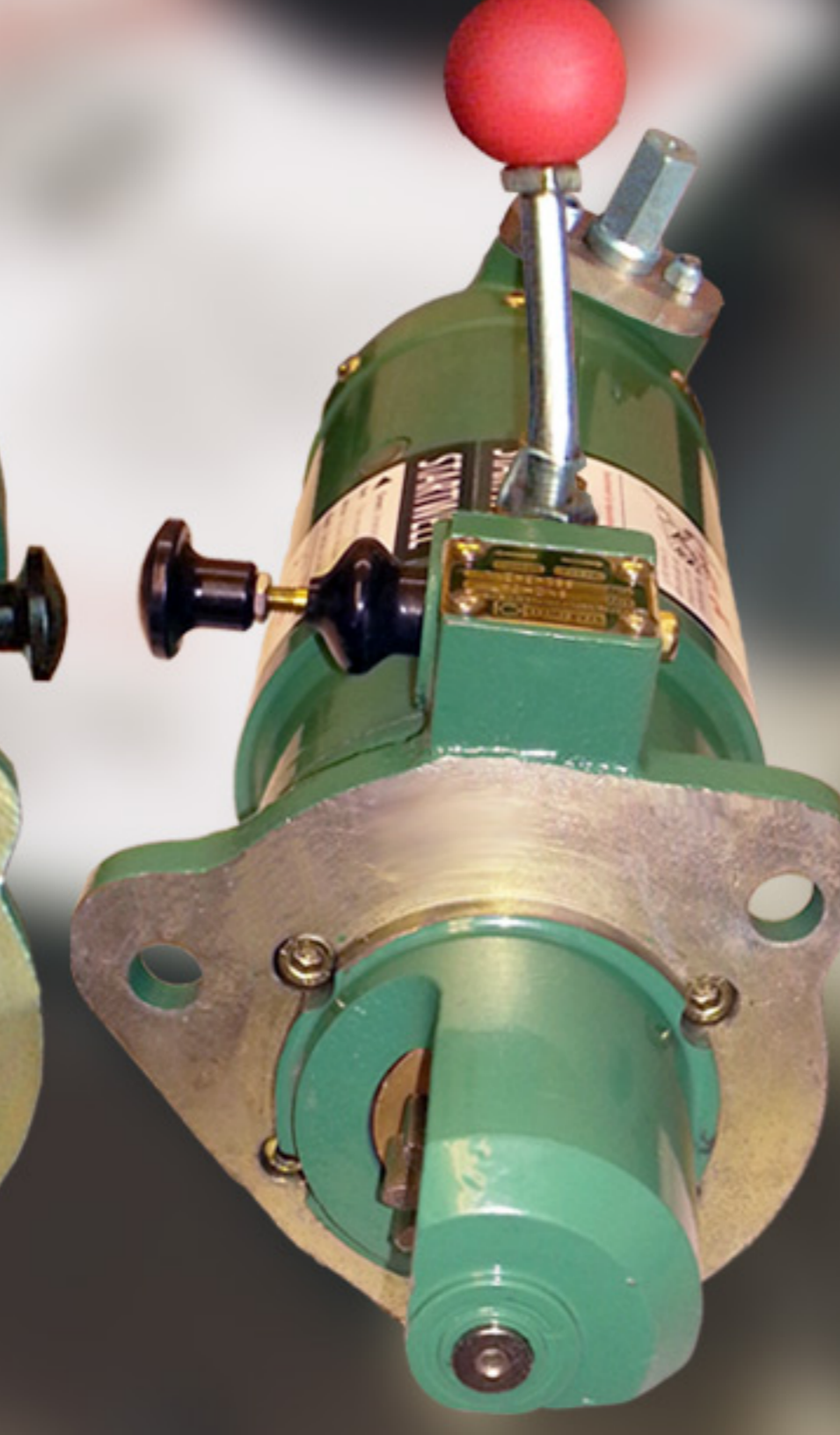
**Midi Starter**



**H/D Midi Starter**



**Maxi Starter**



**H/D Maxi Starter**



**Super Maxi Starter**

