

# 起动机和发电机

## 起动机C60 – 世界上最小的起动机

Starter Motors and Generators

## Starter motor C60 – the world's smallest starter motor for passenger cars



**BOSCH**

博世 科技成就生活之美



### 产品介绍

#### Product description

C代表紧凑型起动机，60是指外壳外径，这意味着博世C60起动机是世界上最小的乘用车起动机。它有3个型号，功率覆盖范围从0.8到1.2kw。它主要针对排量2升及以下的汽油发动机设计，也可以用于已减少阻力扭矩的小型柴油发动机。C60重量只有2kg，大约比目前的产品轻了25%，而它的比功大大增加且超过了500w/kg。C60系列包括悬臂和起停两种类型。

C stands for compact starter motor while 60 specifies the motor's outer diameter in millimeters. This makes the Bosch C60 the world's smallest starter motor for passenger cars. It is available in three versions, which range from 0.8 to 1.2 kW in power. It is designed mainly for gasoline engines with an engine displacement of up to 2 l, but can also be used in small diesel engines with reduced drag torque. Weighing just 2 kg, the C60 is about 25% lighter than currently available products. Its power-to-weight ratio has been increased to over 500 W/kg. The C60 series contains both noseless and start-stop versions.

### 小型汽油发动机在全球份额不断增长

#### Growing global market share of small gasoline engines

C60起动机专门为排量2升以下的汽油发动机而设计，这部分市场占了目前全球汽车市场70%份额，并仍在不断增长。发动机持续小型化是主要原因之一，另一个原因是，新兴市场1.6升及以下排量的紧凑型车辆数量在迅速增长。得益于轻量紧凑的设计，C60特别适合这部分市场。当应用于启动-停止系统时，C60产品系列可安静且舒适地启动发动机。

The C60 is designed for small gasoline engines with an engine displacement of up to 2 l. This segment currently accounts for some 70% of the global market, and is continuing to grow. One of the main drivers of this development is the fact that engine displacement is increasingly being downsized. The other is the fast-growing number of compact cars featuring engines with an engine displacement of up to 1.6 l in the world's emerging markets. Thanks to its lightweight and compact design, the C60 is particularly well suited to this segment. When used with start-stop applications, the C60 series makes starting the vehicle comfortable and quiet.

### 少即是多

#### Less is more

通过减速机构与单向器一体化，运动部件重量减少并且电磁开关的尺寸也相应变小。优化的电气设计并减少了发动机启动时的电压降并节约了1/3的用铜量。紧凑的设计也同样减少了对铝和铁材料的需求。

By combining the planetary gearbox with the over-running clutch, the moved masses have been reduced and the relay resized accordingly. The improved electrical design has minimized the voltage drop at engine start and has reduced the copper content by one-third. The starter motor's compact dimensioning also means a similar reduction in the amount of aluminum and steel required.

### 全球同步开发

#### A global set-up from the very start

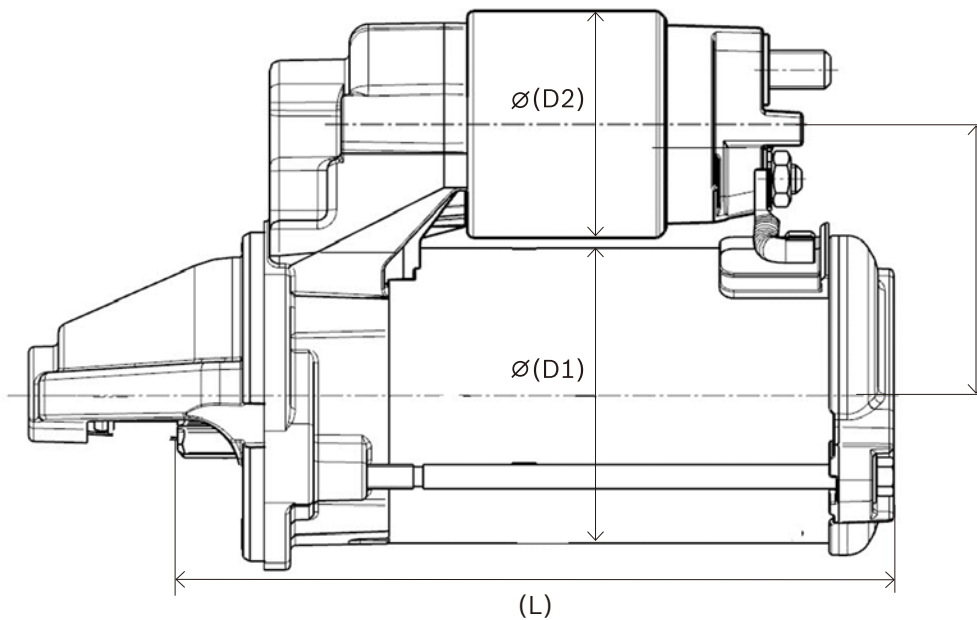
博世在德国、中国、巴西、印度的工程师在全球共同开发C60产品。这款紧凑且高效的起动机在中国，匈牙利、巴西和印度生产，很好地覆盖了其主要市场。

Bosch engineers in Germany, China, Brazil, and India worked together to develop the C60 in the company's global network. The compact and particularly efficient starter motor is produced in China, Hungary, Brazil, and India, which provides ideal coverage of the main markets.

起动机C60产品系列 C60 starter motor family

	<b>C60-S 0.8 kW5</b>	<b>C60-M 1.0 kW</b>	<b>C60-L 1.2 kW</b>
重量 Weight (kg)	1.9	2.0	2.2
长度 Length (mm)	142	149	158
外壳直径 Polehousing $\varnothing$ D1 (mm)	61	61	61
电磁开关直径 Solenoid $\varnothing$ D2 (mm)	47	47	47
轴向距离 Axial distance A (mm)	56	56	56

产品尺寸-起动机 C60-M Main dimensions – Starter motor C60-M



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SG-201403-CNEN