

## Impact Roller Parameter

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## Features:

### 1. **Compaction of the original foundation**

Where it is required to recover or improve the foundation for a damaged highway and high fill, the original road surface can be directly crushed and compacted without necessarily removing the bad soil, so as to exclude the cost for such a removal and the backfill of new soil.

### 2. **Compaction of rock works**

The enormous impact of an impact compactor acts upon the rock fill, and the magnificent impact wave energy may largely increase the locking intensity among rock particles, so as to reduce the deformation due to settlement and the difference of settlement of the embankment, thus loosening strict requirements on the granularity of the fill.

### 3. **High-efficiency compaction of fills**

Today, it is usual to build a fill as high as several dozens of meters or even more than one hundred meters on the express way and airport track. With the use of such a continuous impact compactor, the thickness of each layer of fill can reach 1.0-1.2m, namely, more than 4000m<sup>3</sup> of fill can be compacted per hour, to largely improve the construction efficiency. As for an ordinary vibrating roller, where the soil layer is thicker than 300mm, the compaction effects via the vibration will be noticeably reduced, while the compaction depth of an impact compactor will be significantly increased as the rolling operation continues, which is attributed to the earthquake wave diffusion characteristics of the enormous centralized impact energy produced in the low-frequency rolling impacts of the triangle impact wheel. With the increase of the density, its influence depth will be also increased.

### 4. **Requirements on the moisture content**

Due to the substantial impact energy of an impact compactor, the required best moisture content of different types of soil can be lessened by 3%-5% within both directions, so as to relieve requirements on the moisture content of building materials.

## 5. Self-inspection feature

The impact compactor can build a continuously stable reinforced layer, about 2m thick, beneath the subgrade, through the impact on soil body at a low frequency and with high vibration magnitude and high energy, which is quite critical for the increased useful life of the highway, railway, and airport track. On the surface, it is allowed to directly test the compaction quality of the subgrade by virtue of the settlement obtained, and this is further enhanced in such a test, which is called "Additional reinforcing compaction in inspection" in the road construction industry. Such a 100% test within a large area is unavailable by utilizing any other inspection approach.

# Parameters

## 1、Picture of Impact roller



## 2、Major technical parameters of impact roller

| Item  | Parameter      |                |
|---|----------------|----------------|
| Model   | SD32           | SD35           |
| Operating mass (kg)                                 | 16000          | 17000          |
| Impact energy (kJ)                                  | 32-35KJ        | 36-40KJ        |
| Best working speed (Km/h)                           | 10~15          | 10~15          |
| Compacting width (mm)                               | 2×930          | 2×930          |
| Impact depth(m)                                     | 6m             | 6m             |
| Tire pressure (MPa)                                 | 0.75~ 0.80     | 0.75~ 0.80     |
| Shape of impact wheel                               | Trilateral     | Trilateral     |
| Appearance dimension (length x width x height) (mm) | 4086×2980×2450 | 4086×2980×2580 |

## 3、Main configurations of impact roller

| Item               | Parameter  |
|--------------------|--|
| Energy accumulator | HXQ-A2.5D-Y1   |
| Cushion cylinder   | HSGK01-90/63-115X455   |
| Compressed spring  | HSGK01-150/85-250X680  |
| Shock absorber     | Four kinds of shock absorbers provide dimensional shock absorption for Compactor |
| Etc.               | Impact wheel is of triangle shape, applicable for ground impact                  |