



# Groundwork

## HYDRAULIC EXCAVATOR ROCK SPLITTER



## Introduction

The hydraulic excavator rock splitter is a mechanical method. It is an exclusive rock breaking machine, attached to an excavator. No assistance is needed for this breaking process as a remote control is used directly by the excavator driver. There is no need for a secondary breaking process using impact breaker. The hydraulic excavator rock splitter can carry out continuous breaking by drilling, breaking and hauling procedures.

The hydraulic excavator rock splitter is based on Lami theory. Hydraulic vertical power( $p$ ) is converted into horizontal power ( $R$ ). The angle of the wedge makes 10~20 times horizontal power comparing to vertical power. This power exceeds tensile force and shearing force of rock and then the rock is broken.

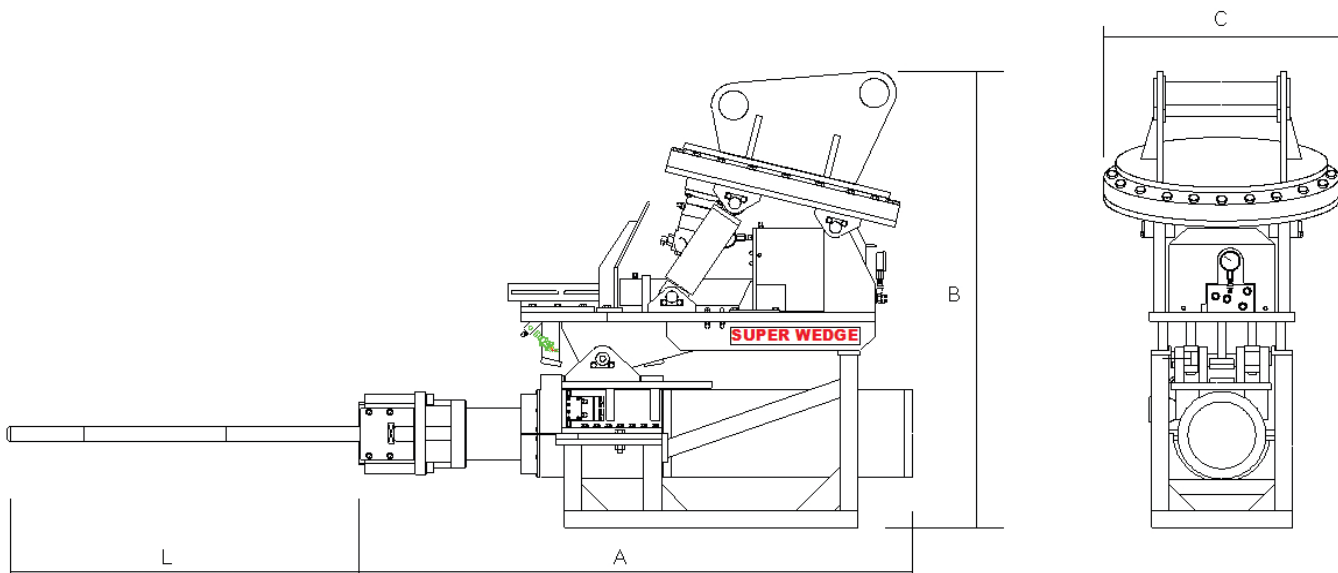


# TSW-1100 Model

Vertical and Horizontal operation

## SPECIFICATIONS

Application Tool	11-14 ton	19-24 ton	24-32 ton
Maximum oil pressure (kg/cm <sup>2</sup> )	320	320	320
Standard oil pressure (kg/cm <sup>2</sup> )	220	220	220
Oil Flow (L/min)	100-120	160-180	160-180
Power of maximum rock splitting (ton)	2,400	2,400	2,400
Width of rock splitting (mm)	15-20	15-20	15-20
Diameter of drilling hole (m/m)	76,89		
Depth of rock breaking (m/m)	900-1,200		
Standard of Equipment (m/m)	A x B x C (1,900 x 1,600 x 800)		
Weight of equipment (kg)	1,700		





## Information

TSW1100 has specialized bracket to easily insert breaking parts (count-wedges and wedge) into horizontal drilling holes to break rock. Regardless of drilling hole position and angle, this bracket device is developed to quickly insert breaking parts into drilling holes.

Generally, many types of equipment are needed for tunnel construction.

The Excavator included TSW can be quickly exchanged to normal bucket attachment or impact breaker attachment after finishing rock breaking process which is big advantage of TSW1100.

Compared to traditional small manual rock splitters which are dangerous as workers have to be close to the tunnel face and risk tunnel collapse and falling rock, the hydraulic excavator rock splitter is a much safer method - no workers are required in the 6-8m safety zone in front of the tunnel face except one operator.

