

## UNITEC CONE CRUSHER

The **UNITEC** Hydraulic cone crusher has been designed and developed as a secondary and tertiary crusher. This crusher offers numerous advantages, such as cubic ore shape, easily maintained and high crushing capacity.

The crushed product is characterized by uniform grain size and power efficiency. Depending on the application, customers can select coarse, medium, fine or super fine types concave to obtain a crusher product which conforms to their own specifications.

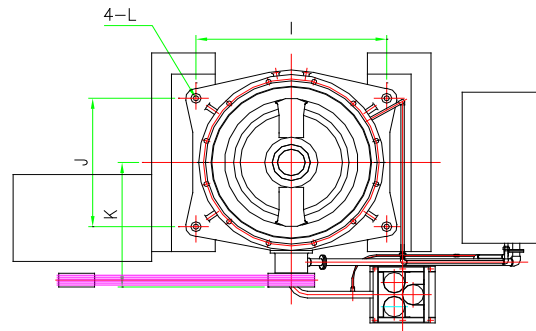
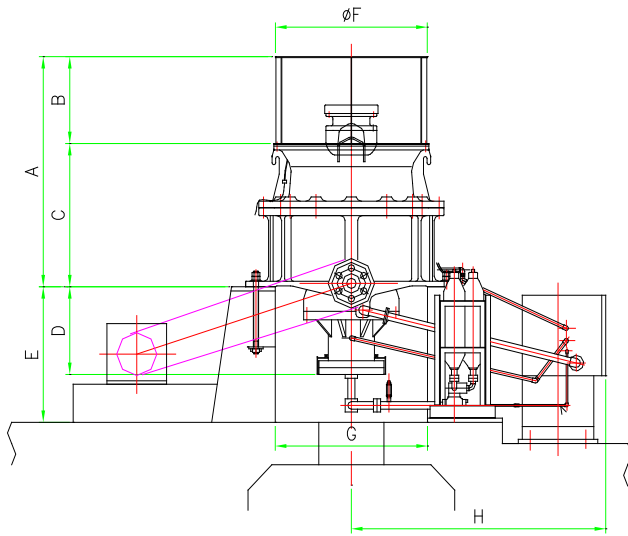


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## **UNITEC INSTALLATION DIMENSIONS**



|          | <b>UNC1000</b> | <b>UNC1200</b> | <b>UNC1350</b> | <b>UNC1500</b> | <b>UNC1650</b> | <b>UNC1800</b> |
|----------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>A</b> | 1790           | 2102           | 2290           | 2678           | 2808           | 3079           |
| <b>B</b> | 650            | 769            | 810            | 900            | 1000           | 1100           |
| <b>C</b> | 1140           | 1333           | 1481           | 1678           | 1808           | 1979           |
| <b>D</b> | 676            | 848            | 950            | 1035           | 1192           | 1385           |
| <b>E</b> | 1250           | 1328           | 1444           | 1600           | 1900           | 2050           |
| <b>F</b> | 1480           | 1776           | 1960           | 2160           | 2368           | 2568           |
| <b>G</b> | 1350           | 1506           | 1710           | 1915           | 2250           | 2500           |
| <b>H</b> | 2400           | 2700           | 2900           | 3100           | 3480           | 3800           |
| <b>I</b> | 1750           | 2070           | 2310           | 2550           | 2850           | 3150           |
| <b>J</b> | 1250           | 1500           | 1680           | 1850           | 2100           | 2350           |
| <b>K</b> | 1118           | 1294           | 1476           | 1649           | 1985           | 2206           |
| <b>L</b> | M36            | M42            | M48            | M58            | M64            | M64            |

Notes: The above table is nominal dimensions.

## **Typical Specification**

### **Main frame**

In designing the top and bottom shells finite element analysis was used, with this method the shells were strengthened by adding circumferential as well as the standard integrally cast ribs. This enables the crusher to have greater resistance to the crushing forces, withstand distortion and rigidly maintain true alignment of the mechanical parts. The top and bottom frames are high quality carbon steel castings that have matching tapered faces. These are bolted together using fitted bolts to ensure the integrity of the assembly.

### **Head and mantle**

The crushing head assembly consists of and homogenised main shaft, cast steel head and high manganese steel mantle line.

The main shaft and head are tapered to ensure a secure fit. The mantle is machined internally to match the head taper and locked into position by the torch ring and head nut.

### **Concave liner**

The manganese concave liner is also machined to match the mainframe top shell and is bolted into position

### **Lower bearing**

The lower bearing assembly consists of the carbon steel eccentric sleeve, leaded copper inner bush, leaded copper outer bush and a leaded bronze step bearing.

The leaded bronze thrust bearing is supported by a carbon steel bottom plate casting, which is designed to withstand the thrust loads produced by the spiral bevel gear fitted to the eccentric sleeve.

### **Drive shaft assembly**

The horizontal drive shaft assembly is fitted with roller bearings housed in a cast steel sleeve.

This is designed to withstand the radial and thrust loads experienced during the crushing operation.

Spiral tooth bevel gears are also utilised to have a more efficient transmission of power and reduce noise levels

For ease of maintenance the sleeve is removed as a one piece unit by simply removing the bolts in the outer flange.

## Machine Type & Capacity

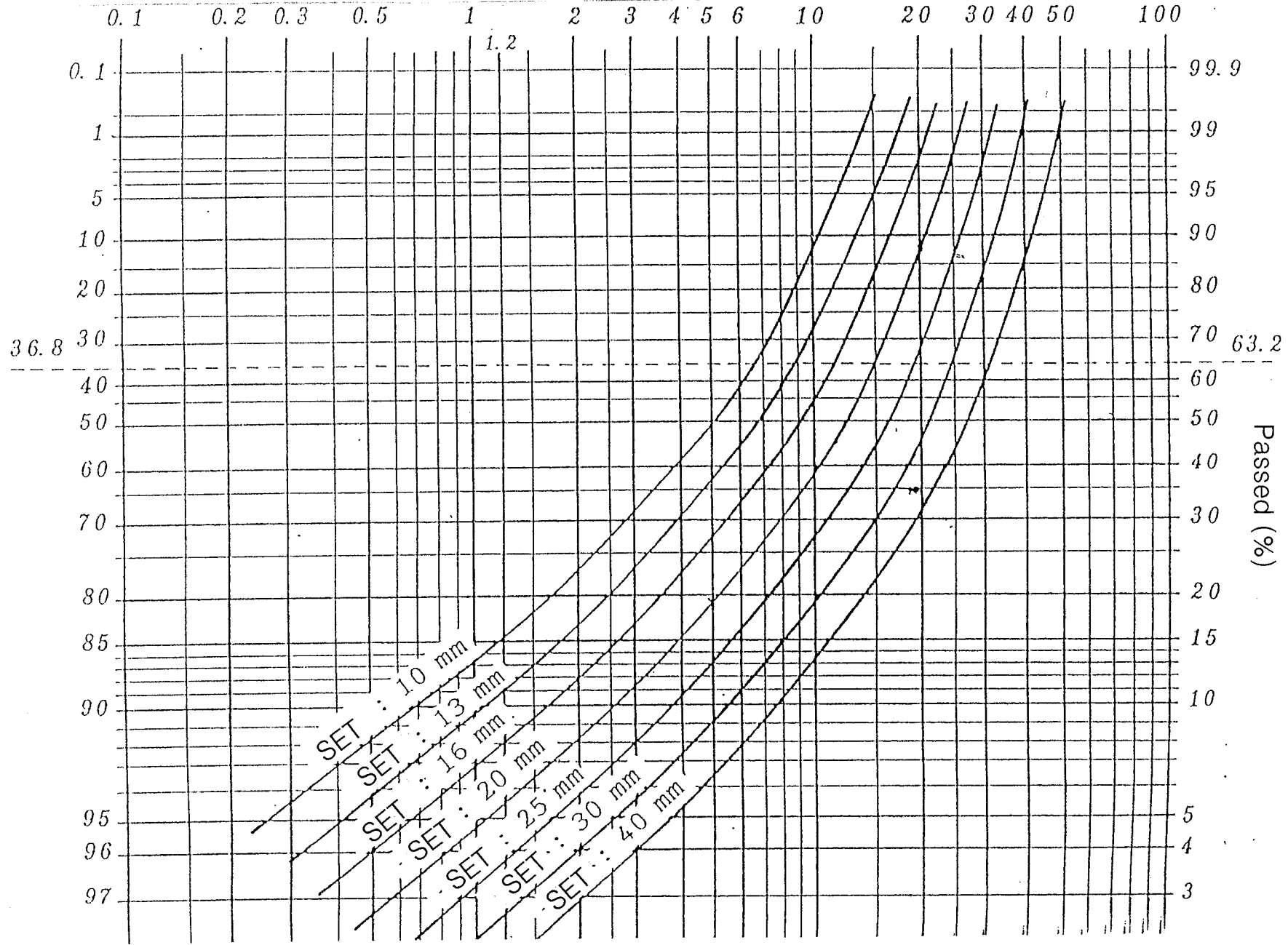
| UNITEC CONE MODEL | F/O (mm) | Max. Feed size(mm) | Setting Range(mm) | Capacity (tph) | Motor(kw) | Drive Pulley PCD(mm) |
|-------------------|----------|--------------------|-------------------|----------------|-----------|----------------------|
| UNC1000           | 270      | 215                | 25-40             | 155-195        | 110       | 470                  |
| UNM1000           | 200      | 160                | 15-25             | 119-148        |           |                      |
| UNM1000           | 130      | 105                | 10-20             | 95-132         |           |                      |
| UNF1000           | 100      | 80                 | 10-15             | 88-107         |           |                      |
| UNC1200           | 320      | 255                | 25-40             | 222-285        | 150       | 490                  |
| UNM1200           | 240      | 190                | 15-25             | 169-214        |           |                      |
| UNF1200           | 160      | 130                | 10-20             | 134-186        |           |                      |
| UNF1200           | 120      | 95                 | 10-15             | 128-155        |           |                      |
| UNC1350           | 360      | 290                | 25-40             | 282-360        | 190       | 560                  |
| UNM1350           | 270      | 215                | 20-30             | 247-303        |           |                      |
| UNM1350           | 180      | 145                | 13-25             | 191-268        |           |                      |
| UNF1350           | 130      | 105                | 10-20             | 162-233        |           |                      |
| UNC1500           | 400      | 320                | 30-40             | 385-445        | 220       | 580                  |
| UNM1500           | 300      | 240                | 20-30             | 307-375        |           |                      |
| UNM1500           | 200      | 160                | 15-25             | 257-332        |           |                      |
| UNF1500           | 150      | 120                | 13-20             | 230-292        |           |                      |
| UNC1650           | 450      | 360                | 30-40             | 465-540        | 270       | 600                  |
| UNM1650           | 330      | 265                | 20-30             | 372-455        |           |                      |
| UNM1650           | 220      | 175                | 15-25             | 310-405        |           |                      |
| UNF1650           | 170      | 130                | 13-20             | 280-352        |           |                      |
| UNC1800           | 500      | 400                | 30-40             | 550-640        | 330       | 600                  |
| UNM1800           | 360      | 290                | 20-30             | 440-540        |           |                      |
| UNM1800           | 240      | 200                | 15-25             | 370-480        |           |                      |
| UNF1800           | 180      | 140                | 13-20             | 330-420        |           |                      |

### NOTES

- Crushing capacity varies with properties and sizes of raw materials.
- The above table's capacities are based on clean, dry and brittle materials similar to limestone.
- Capacity based on materials having a bulk density of 1.6 and moisture.

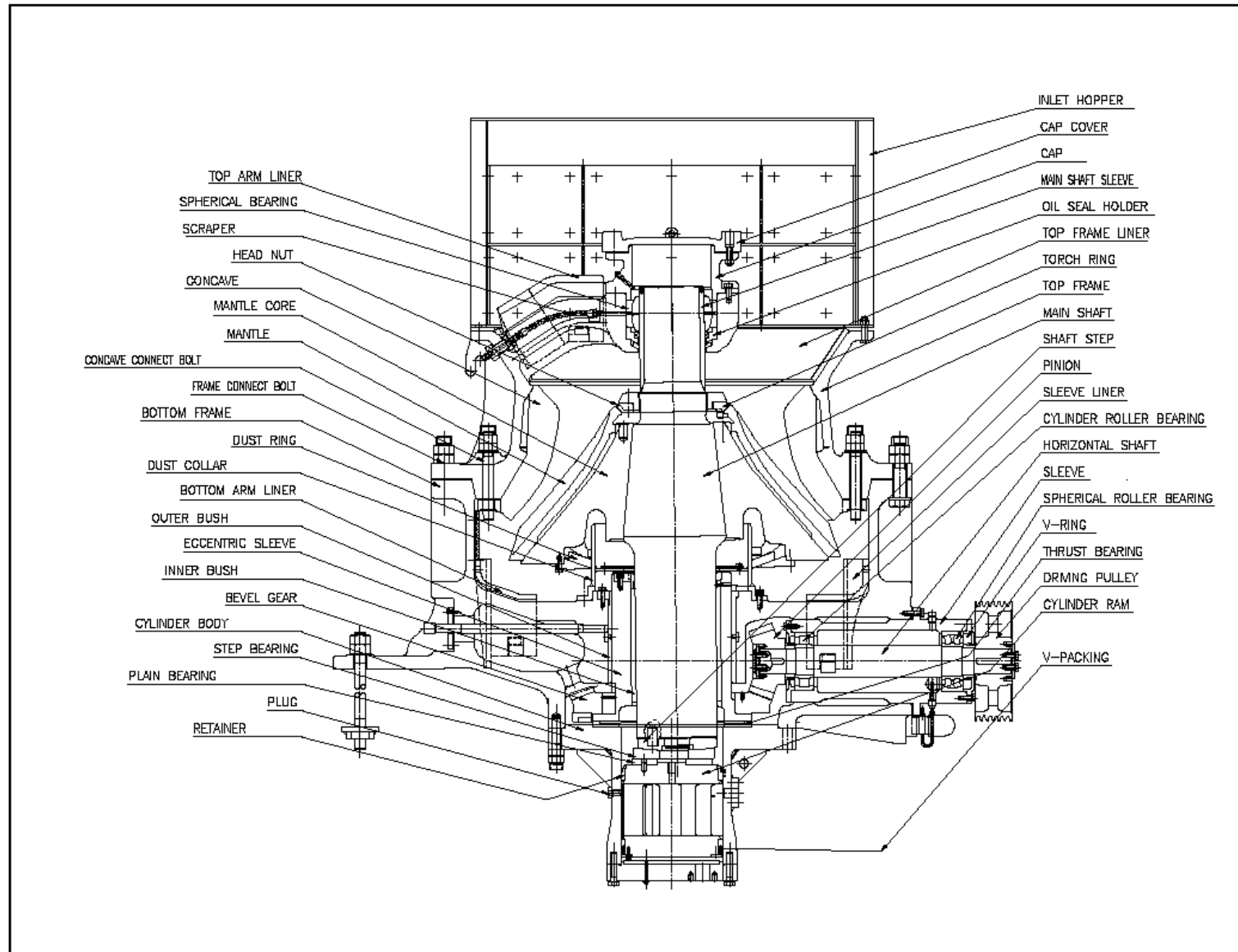


# Particle size(mm)



SIZE DISTRIBUTION  
STANDARD

# UNITEC CROSS SECTION



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