UNLEASH THE FULL POTENTIAL OF YOUR OPERATIONS
SANDVIK CONE CRUSHERS

EXCELLENCE IN QUALITY AND PERFORMANCE

Sandvik in Svedala has been developing cone crushers for several generations. Today we have thousands of cone crushers in operation around the world. The knowledge and experience of cone crushing technology is unique and an important part of the Sandvik brand.

Our cone crushers are of advanced design with a small footprint and high capacity in relation to size. They have high reduction efficiency and give very good product shape. With hydraulically adjusted CSS, the option of automation, a choice of several different crushing chambers, and many other high-performance features, each model is versatile, user-friendly and highly productive.

The CS- and CH-series of cone crushers have a wide field of use as they can easily be matched to changes in production through the proper selection of crushing chamber and eccentric throw. Our cone crushers are ideal for secondary and tertiary crushing and the compact and easy-to-service design also makes them a perfect choice for mobile installations.

Our sophisticated HYDRO-CONE™ technique enables you to run your crusher at maximum performance levels under changing feed conditions without overloading the crusher. Together with our automatic control system you will have a crusher which safely maximizes operational uptime.

CLP crushing chamber. CLP stands for Constant Liner Performance. The almost vertical profile of the feed opening area means that the shape of the chamber remains virtually unchanged throughout the wearing life.
HIGH PERFORMANCE
LOWEST TOTAL COST
WITH CLP

The CLP crushing chambers in combination with high motor powers give these crushers capacities which are in most cases comparable with larger crushers.

THE CLP ADVANTAGES ARE:
- Constant feed acceptance capability
- Increased output
- High-quality products
- Increased liner life
- Lowest total cost

EXCELLENT VERSATILITY

Our cone crushers have a wide field of use. Several standard crushing chambers are available for each model.

The crushers can easily be matched to changes in production through the proper selection of crushing chamber and eccentric throw.

Our cone crushers are an excellent choice as secondary crushers in combination with a jaw or a primary gyratory crusher or in the third or fourth crushing stage. Thanks to their built-in versatility, these crushers will enable you to cope with most production requirements in a changing future.

Several standard crushing chambers are available. The crushers can easily be matched to changes in production by the proper selection of crushing chamber and eccentric throw.
FULL CONTROL OF THE PROCESS

HYDROSET SYSTEM
The Hydroset system provides safety and setting adjustment functions, and incorporates a heavy-duty hydraulic cylinder which supports the mainshaft and adjusts its position.

The Hydroset system provides automatic overload protection to permit the passage of tramp iron or other uncrushable material. The system then automatically returns the main-shaft smoothly to its original position.

AUTOMATIC CONTROL SYSTEM
When the cone crusher is equipped with our automatic setting system, it automatically adapts the crusher to variations in feed conditions.

By continuously measuring and compensating for crusher liner wear, the automation system allows you to fully utilize crusher liners and schedule liner replacements to coincide with planned maintenance stops. It also assists in keeping your crusher choke fed.

This maximizes rock-on-rock crushing, which helps to optimize the quality of your final product. The new CHS40 and CHS50 crushers come with the control system as standard equipment.

EASY TO HANDLE AND MAINTAIN
Much attention has been paid to making our crushers as easy to operate and maintain as possible. All service and inspection is carried out from above, which makes the work easier and the maintenance costs lower.

Robust sealing to the inner crusher mechanics provides more effective protection against dust and other unwanted particles – reducing maintenance and increasing the life of the crusher.

In addition to the high capacity, our CS & CH crushers are compact, which makes them easy to move and to install.
The product curve and the percentage of the crusher product that is smaller than the closed side setting (square hole, mm) is dependent on the crushability (Wi) of the material, the size distribution of the feed and other factors.

### APPROXIMATE WEIGHTS

<table>
<thead>
<tr>
<th>CS-Type</th>
<th>CH-Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS420</td>
<td>CH420</td>
</tr>
<tr>
<td>CS430</td>
<td>CH430</td>
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<tr>
<td>CS440</td>
<td>CH440</td>
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<tr>
<td>CS660</td>
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<td>CS890</td>
<td>CH890</td>
</tr>
<tr>
<td>CS895</td>
<td>CH895</td>
</tr>
</tbody>
</table>

**Heaviest lift during maintenance:**
- CS420: 2300 kg
- CS430: 5100 kg
- CS440: 8100 kg
- CS660: 16500 kg
- CH420: 1400 kg
- CH430: 2900 kg
- CH440: 4700 kg
- CH660: 11100 kg
- CH540: 6000 kg
- CH680: 6000 kg
- CH550: 8500 kg
- CH870: 13200 kg
- CH890: 21600 kg
- CH895: 24900 kg

**Total weight:**
- CS420: 6800 kg
- CS430: 12000 kg
- CS440: 15000 kg
- CS660: 31000 kg
- CH420: 5300 kg
- CH430: 6000 kg
- CH440: 14300 kg
- CH660: 14300 kg
- CH540: 12500 kg
- CH680: 14100 kg
- CH550: 26800 kg
- CH870: 43100 kg
- CH890: 76100 kg
- CH895: 79100 kg

* 16600 kg = topshell assembly + spider assembly. 9700 kg = topshell assembly only.

** Applies to crusher with fine crushing chamber. With coarse crushing chamber, these weights are reduced by approximately 380 kg for the CH430, by 600 kg for the CH440, CH450, CH660 and CH870 and by 3800 kg for the CH480 model.

Note: Reference line (not floor level) giving minimal dimensions for removal of: 1. Hydroset cylinder, 2. Pinion shaft, 3. Main shaft
### CHAMBERS

Three standard crushing chambers are available:

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC</td>
<td>Medium Coarse</td>
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</tr>
<tr>
<td>C</td>
<td>Coarse</td>
<td></td>
</tr>
<tr>
<td>EC</td>
<td>Extra coarse</td>
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</tbody>
</table>

### CRUSHING

Several standard crushing chambers are available:

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Type</th>
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</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>M</td>
<td>Medium</td>
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<tr>
<td>MC</td>
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<tr>
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<tr>
<td>EC</td>
<td>Extra Coarse</td>
<td></td>
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</tbody>
</table>

### CH-CRUSHERS

Three standard crushing chambers are available:

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS-CRUSHERS</td>
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<tr>
<td>CH430</td>
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<td>CH440</td>
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<tr>
<td>CH660</td>
<td>315</td>
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</tr>
</tbody>
</table>

### PERFORMANCE FIGURES

Some of the performance figures are approximate and give an indication of what the crusher's design is capable of producing.

- **Chambers**
  - **COARSE**
  - **MEDIUM**
  - **MEDIUM FINE**

- **Performance Figures**
  - **CH420**
  - **CH430**
  - **CH440**
  - **CH660**

### CAPACITY, MTPH

Performance figures are approximate and give an indication of what the crusher can produce.

They apply to open circuit crushing of dry material with a bulk density of 1600 kg/m³. It is assumed that material much finer than the crusher’s closed side setting (CSS) is removed from the feed.

Consult us regarding the application of the crusher since the chosen eccentric throw, degree of reduction, the material’s crushability (Wi), the size analysis of the feed, the design of any recoil and recirculating feedback, and the moisture content of the feed will affect performance of the crusher.
FEATURES WHICH MAKE OUR CONE CRUSHERS THE BEST ON THE MARKET

An easy-to-maintain crusher. Maintenance and inspection from above.

The crusher has a CLP crushing chamber as standard. One topshell is used for all crushing chambers.

The robust design provides the strength and stability necessary for the crushing of extra-hard materials. The design also results in low maintenance costs.

Inspection holes are provided in the bottomshell.

Prepared for the installation of the control system.

1. Long life from liners of special alloy manganese steel.
2. CH crushers have automatic overload protection system as standard (accumulator or dump valve). The CH540, CH550, CH870, CH890 and CH895 have a pressure limiting valve. Other models have an accumulator.
3. The interior of the crusher is protected from dust by a self-lubricating seal ring.
4. The bottomshell arms have liners of special alloy steel.
5. Quiet operation and long life thanks to bevel gears with hardened, spiral-cut teeth.
6. Product curve and capacity can be optimized by adjusting the eccentric bushing supplied with the crusher.
7. Large feed opening. The two top-shell arms are protected against wear by robust liners of special alloy steel.
8. Mainshaft protected by replace able sleeve and inner headnut.
9. CLP crushing chamber design maintains feed opening throughout the entire life of the liners.
10. Easy adjustment of gear back lash.
11. Robust design of the pinion-shaft assembly. The pinion-shaft and its bearings are built as a single unit which can be removed without taking the crusher apart.
12. Oil tank unit
   - filtration
   - cooling and heating
   - circulation pump
   - monitors for temperature and flow rate
   - interlocks

LUBRICATION

- Separate lubrication (grease) for the spider bearing.
- The oil tank unit automatically maintains oil flow to the various bearings. This system permits full lubrication even before the crusher itself is started since the pump is independent of the crusher. The oil is filtered and cooled automatically.
- The oil tank for the lubrication and Hydroset systems is a self-contained unit incorporating filters, heating and cooling equipment, pumps, temperature and flow rate monitors and electrical interlocks.
- The pinionshaft unit has separate lubrication.
EGYPTIAN QUARRY BENEFITS FROM SANDVIK’S CH430 & CH440 AND FLEXIFEED™ MANTLE

Sandvik Construction’s authorized distributor for crushing and screening products in Egypt, Stallion for Investment, has improved aggregate quality, operational productivity and efficiency, at a customers site through the use of CH430 and CH440 cones used in conjunction with Sandvik’s Flexifeed™ mantle. The mantle has been fitted to the customer’s cone crushers in order to more effectively process abrasive aggregate, playing a key role increasing capacity, as well as reducing the cost per ton of production.

Egypt’s Stallion for Investment Co, a company part of the renown Rodan Group of companies, founded in 1976 by Ashraf L. Youssef, specifically to meet the growing demands of the road construction and quarry industry in Egypt for high end equipment and spare parts, all backed by the very best in aftermarket service.

Today the Rodan Group is one of Egypt’s leading road construction and quarry equipment distributors, with the group specifically aiming to offer their customers access to equipment from some of the leading equipment manufacturers. This has proved to be particularly pertinent to the road construction and quarrying industries, with the Rodan Group now representing a wide-ranging portfolio of manufacturers through the group’s locally developed, but rapidly expanding, network of affiliated companies. These companies have been strategically positioned so as to support the specific requirements of the customers through catering to their exacting requirements, and supplying equipment through the highest levels of aftermarket support and customer service.

The hard work and professionalism of the Rodan Group in general, and the Stallion for Investment Company specifically, was recently shown when a longstanding quarry customer, who also acts as a distributor for a Chinese crusher manufacturer, sought help and advice in maximizing productivity whilst improving end product quality. The customer, producers of aggregates for the burgeoning Egyptian construction industry, is a contented user of both Sandvik CH430 and CH440 stationary cone crushers, which have performed superbly since their installation.

Stallion for Investment customers’ quarry possesses a very 99% Silica rock, which due to its abrasive nature, proved to be particularly hard wearing on the liners of the Sandvik cones. Although performance was exceptional, and well within the parameters established by the customer providing production of over 150mtph, the liners were only lasting an average of twelve days of continuous fifteen hours daily operation. Thus a new solution was required: the Flexifeed™ mantle from Sandvik Construction. As Mr. Tarek Youssef explains the results: “On the CH440 the liners lasted a great deal longer, even though the Flexifeed™ is a heavier mantle with more material in it. Based on our advice the customer used to operate their jaw and a cone at any given time so we were able to switch between the CH430 and the CH440 whenever the liners wore down, thereby giving us time to change the liners of one cone while the other was operating, thereby providing almost continuous production.”

FLEXIFEED™ MANTLE IMPROVES CRUSHING EFFICIENCY.

The Sandvik-developed and patented Flexifeed™ mantle optimizes the crushing process producing a finer product and greater reduction through the crusher. This is accomplished as the mantle is able to achieve a more efficient crushing operation due to the latest chamber design. Thus through the use of the Flexifeed™ mantle the crusher is able to accept over-sized material in part of the chamber, whilst simultaneously reducing the chamber profile in the opposing part of the chamber, thereby permitting operation at a tighter setting. This results in a finer product being produced on a “first pass basis”, but also a superior shape which is essential when the equipment is set up to produce single-size products. Of Stallions customers’ use of Flexifeed™ mantle Mr. Tarek Youssef explains, “The difference the mantle makes is essentially improved crushing efficiency. That means, in simple terms, we get better productivity and lower cost per ton. Furthermore as our customer is keen to minimize its carbon footprint, improved crushing efficiency means not only better production, but also lower emissions.”

PERFORMANCE THROUGH INNOVATION

Sandvik Construction is justifiably proud of its cone crushing technology, with high productivity and low cost of ownership being key features. The development and use of the Flexifeed™ mantle shows that even the best equipment can be improved upon. Sandvik cone crushers, such as the CH 430, are of advanced design, with high capacity and high reduction efficiency. With hydraulically adjusted CSS and automatic wear compensation, a choice of different crushing chambers and eccentric throws, and many other high-performance features, each model is versatile, user-friendly and highly productive. Every Sandvik cone crusher is a product of know-how and experience optimized by 3D CAD and Finite Element Analysis (FEA). Each model is tested virtually for stress, strain, shock, deformation, thermal loading, vibration and noise under a wide range of load conditions. The result in reality is exceptional reliability. The Flexifeed™ mantle has proved to be a highly cost effective solution for Stallions customer; how much, and to what extent, is still under evaluation. As well as demonstrating Sandvik Construction’s advanced crushing solutions it also demonstrates the knowledge base and professionalism of the Rodan Group, in providing real solutions that are focused on maximizing their customers operations, efficiency and profitability.