Sandvik
Cone Crushers

SANDVIK

• High performance – lowest total cost • Excellent versatility • Full control of the process • Easy to handle and maintain • Reliable

• Produces material of excellent shape • Compact, robust design with wide feed opening • Several standard crushing chambers available • Hydraulic adjustment with the Hydroset system • Can be equipped with automatic control system • All maintenance and inspection from above – quick and easy

Cone Crushers

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.

Sandvik 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 Sandvik 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 makes them a perfect choice for mobile installations.

Sandviks sophisticated HYDROCONE™ 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.

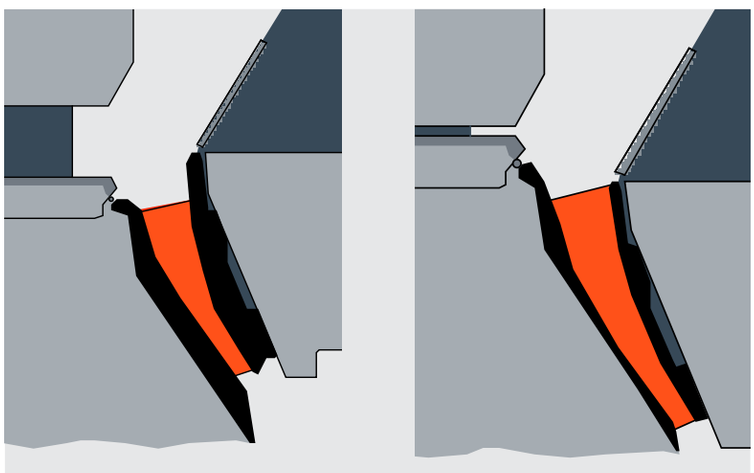

CH550
SANDVIK

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



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.


SANDVIK

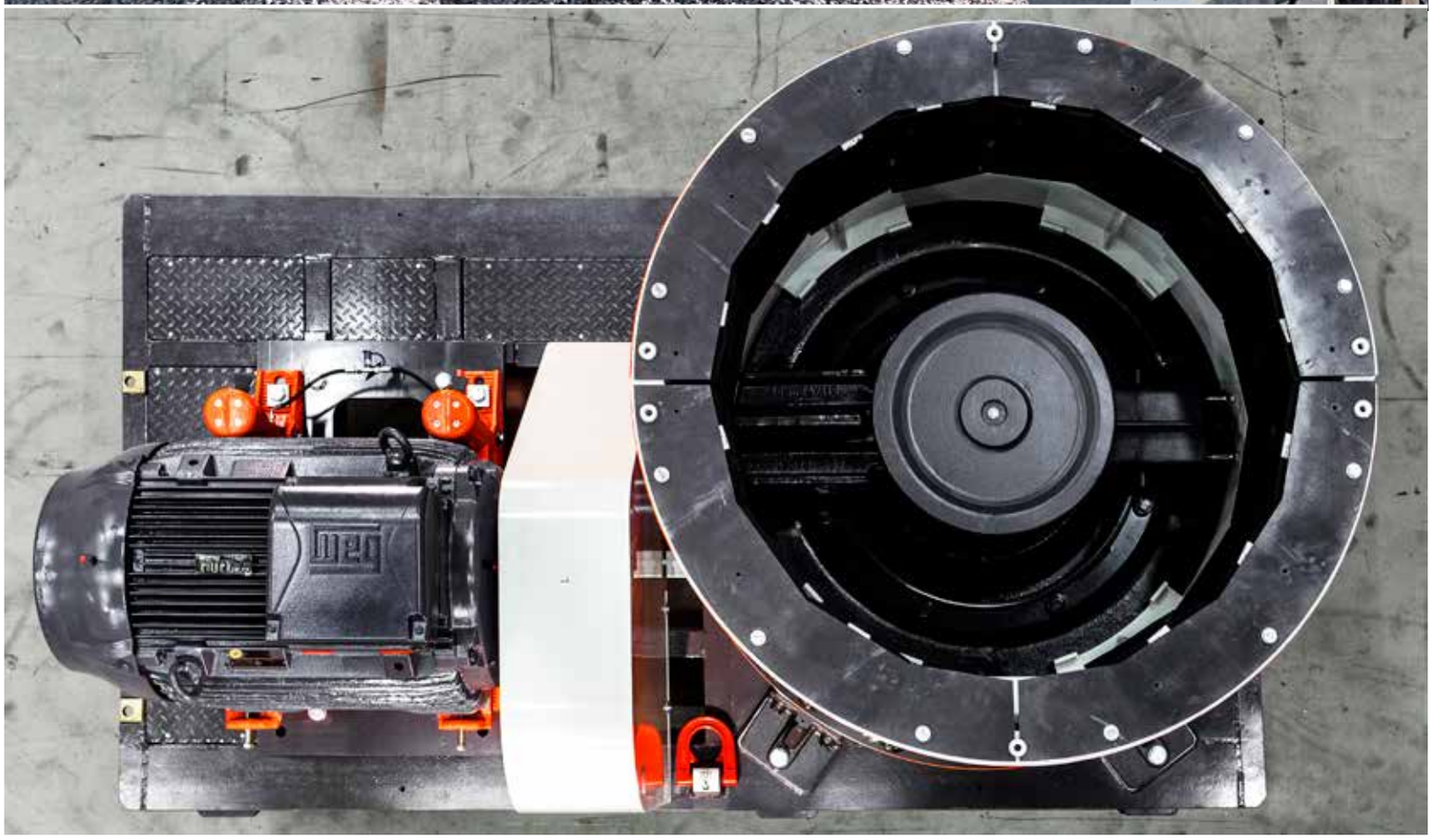
Excellent Versatility

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.

Sandvik 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 mainshaft 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 CH540 and CH550 crushers comes with the control system as standard equipment.

The crushers can be equipped with an automatic setting system, which monitors the load on the crusher. This gives considerably improved results and optimum crusher utilization.

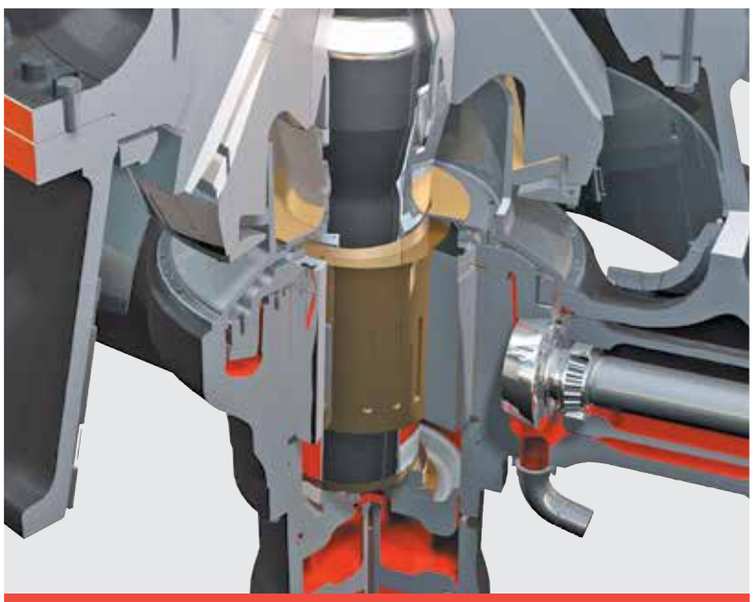
Easy to Handle and Maintain

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.

The automatic control regulation system not only optimizes production, it also keeps track of liner wear. This makes it easy to plan liner changes and minimize interruptions in production.

In addition to the high capacity, Sandvik CS & CH crushers are compact, which makes them easy to move and to install.



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

Customer Satisfaction

To reach your productivity targets, optimal performance and reliability of your equipment is key. At Sandvik Construction we understand your business needs and share your goals in terms of safe and efficient operations that increase productivity. We not only offer you the industry's leading range of construction equipment, but the total solution including services that boost the productivity of your daily operations.

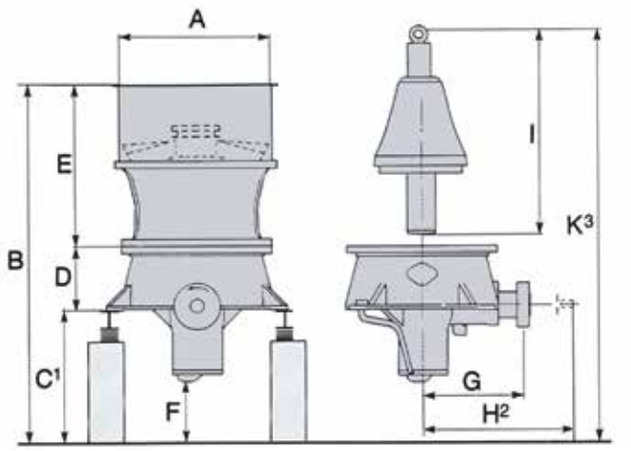
Our equipment is built to last in tough conditions, but even the best of machines require regular care and maintenance to keep running. In fact, taking proper care of your equipment will not only keep them running, it will also increase the efficiency of both your equipment and production processes.

When combining Sandvik Construction's advanced, high-technology products with service and training you can unleash the full potential of your operations.

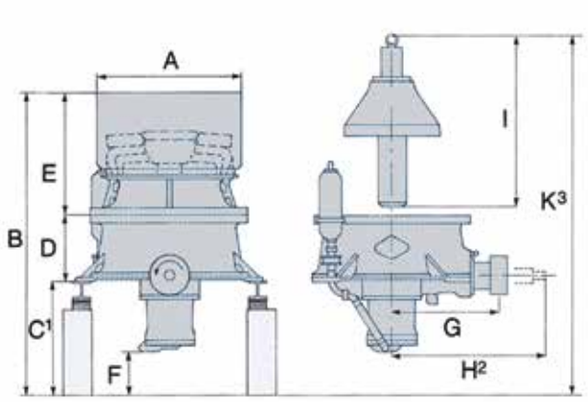
Sandvik Construction service and original parts give you the reliability and equipment uptime you need to keep operations running optimally

Dimensions, mm

CS-type



CH-type



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

Dim.	CS420	CS430	CS440	CS660	CH420	CH430	CH440	CH540	CH550	CH660	CH870	CH890	CH895
A	Ø1285	Ø1635	Ø2000	Ø2800	Ø1078	Ø1360	Ø1540	Ø1549	Ø1890	Ø2104	Ø2660	Ø2900	Ø2900
B	2902	3485	4075	5100	2560	2992	3410	3296	3410	4215	5475	6450	6450
C^1	1020	1125	1300	1600	1020	1125	1300	1160	1300	1600	2200	2870	2870
D	540	655	745	860	540	655	745	800	910	860	1228	1190	1190
E	1342	1705	2030	2640	1000	1212	1365	1336	1462	1755	2045	2400	2400
F	400	422	452	631	400	422	452	406	430	631	998	1150	1150
G	843	1061	1280	1497	843	1061	1280	1136	1276	1497	1824	1960	1960
H^2	1270	1705	1900	2156	1270	1705	1900	1706	1885	2156	2850	3100	3100
I	1703	2050	2420	2895	1425	1688	1985	1844	2087	2344	3095	3500	3500
K^3	3600	4250	4930	5355	3000	3570	4000	3904	4352	4835	6600	7700	7700

Dimensions are intended only as a guide for preliminary planning of the installation and should not be used for the construction of foundations, etc.

Approximate Weights, kg

	CS420	CS430	CS440	CS660	CH420	CH430	CH440	CH540	CH550	CH660	CH870	CH890	CH895
Heaviest lift during maintenance	2300	5100	8100	16500*	1400**	2900**	4700**	4000	6000**	8500**	13200**	21600	24900
Total weight	6800	12000	19300	35700	5300**	9200**	14300**	12500	18400**	26800**	49800**	76100	79100

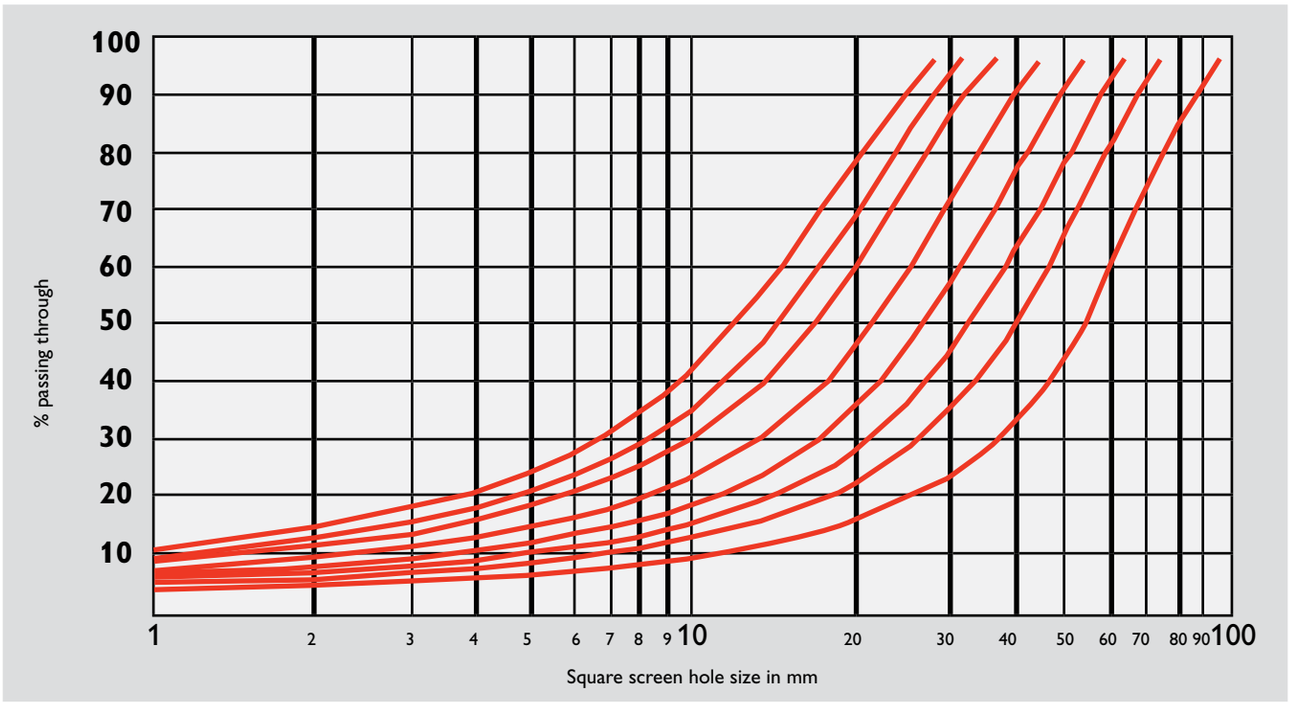
* 16500 kg = topshell assembly + spider assembly. 9700 kg = topshell assembly only.

**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, CH550, CH660 and CH870 and by 3800 kg for the CH880 model.

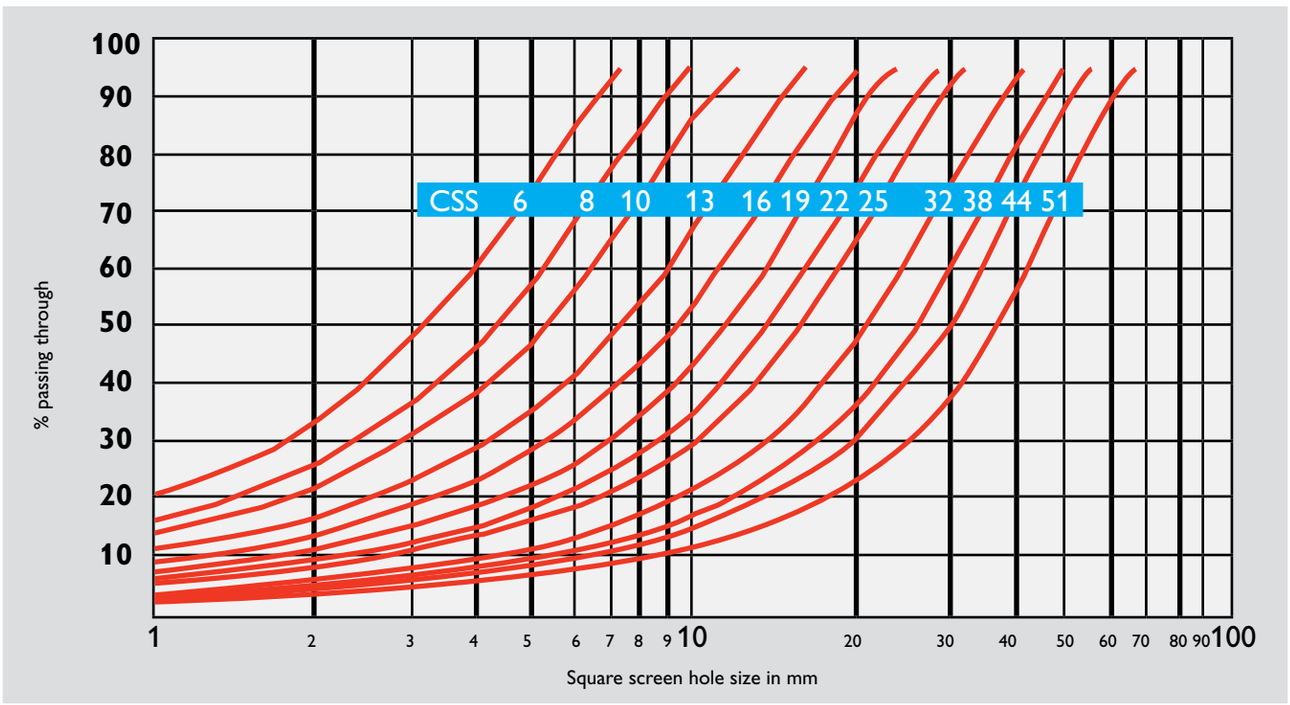
Product Curves

The product curve and the percentage of the crusher product that is smaller than the closed side setting (square hole, mm) is dependant on the crushability (W_i) of the material, the size distribution of the feed and other factors.

CS-crushers



CH-crushers



Crushing chambers

CS-crushers
Three standard crushing chambers are available:

MC = Medium Coarse
C = Coarse
EC = Extra coarse

CH-crushers
Several standard crushing chambers are available:

EEF = Extra Extra Fine
EF = Extra Fine
EFX = Extra Fine Xtra
F = Fine
MF = Medium Fine
M = Medium
MC = Medium Coarse
C = Coarse
CX = Coarse Xtra
EC = Extra Coarse

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/m^3. 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 (W_i), the size analysis of the feed, the design of any recrushing circuit and the moisture content in the feed all affect performance of the crusher.

CS-crushers

	Max motorsize kW		Max feed size mm	19	22	25
CS420	90	EC	240		85	92-115
		C	200	70	76-95	82-128
CS430	132	EC	360			126
		C	300		108	116-145
		MC	235	91	98-123	106-166
CS440	220	EC	450			
		C	400			
		MC	300			195
CS660	315	EC	560			
		C	500			

CH-crushers

	Max motorsize kW		Max feed size mm	4	6	8
CH420	90	EC	135			
		C	90			
		M	65			36-4
		MF	50		36	38-6
		F	38	27-34	29-50	31-5
		EF	29			
CH430	132	EC	185			
		C	145			
		MC	115			
		M	90			
		MF	75			61
		F	50		48-78	51-8
		EF	35			
CH440	220	EC	215			
		C	175			
		MC	140			
		M	110			
		MF	85			
		F	70			90-13
		EF	38			
CH540	250	EC	185			
		C	135			
		M	85			70-11
		F	55	45-59	48-103	51-11
		EF	44	39-84	42-90	44-9
CH550	330	EC	215			
		C	175			
		MC	140			
		M	110			
		MF	85			115-1
		F	70		95-123	102-1
CH660	315	EC	275			
		CX	245			
		C	215			
		MC	175			
		M	135			
		MF	115			
		F	85			
		EF	65			
CH870	500	EC	300			
		C	240			
		MC	195			
		M	155			
		MF	100			
		F	90			
		EF	80			
CH890	750	EC	370			
		C	330			
		MC	300			
		M	230			
		MF	160			
		F	120			
CH895	750	EFX	100			
		EF	85			
		EEF	75			

Nominal capacity in t/h with crusher running at CSS mm														
25	29	32	35	38	41	44	48	51	54	60	64	70	76	83
2-115	101-158	107-168	114-143	121										
2-128	90-112	96												
126	138-173	147-230	156-293	165-310	174-327	183-344	196-306	205-256	214					
6-145	127-199	135-254	144-270	152-285	161-301	196-264	108							
6-166	116-218	124-232	131-146	139-261	147-275	154-241	165							
			267	282-353	298-446	313-563	334-601	349-524	365-456					
	225	239-299	254-381	269-484	284-511	298-448	318-398	333						
195	214-267	228-342	242-435	256-461	270-486	284-426	303-378	317						
					349	368-460	392-588	410-718	428-856	465-929	489-978	525-1050	562-983	604
				318	336-420	353-618	376-753	394-788	411-823	446-892	469-822	504-631		

Nominal capacity in t/h with crusher running at CSS mm													
8	10	13	16	19	22	25	32	38	44	51	57	64	70
	46	50-85	54-92	85-99	62-105	66-112	76-128						
	43-53	46-89	50-96	54-103	57-110	61-118	70						
36-44	38-74	41-80	45-76	48-59									
38-67	40-71	44-68	47-53										
31-54	32-57	35-48	38										
30-40 with 80% finer than 4.5-5.5 mm													
		69-108	75-150	80-161	86-171	91-182	104-208	115-208					
		66-131	71-142	76-152	81-162	86-173	98-197	109-150					
	57	62-140	67-151	72-162	77-173	82-184	93-145						
	64-84	69-131	75-142	80-152	86-162	91-154	104						
61	65-106	70-115	76-124	81-126	87-114	92							
51-83	54-88	59-96	63-103	68-105	72-95	77							
70-90 with 80% finer than 5-5.6 mm													
			114-200	122-276	131-294	139-313	159-357	175-395	192-384				
		101	109-218	117-292	125-312	133-332	151-378	167-335	183-229				
		97-122	105-262	113-282	120-301	128-320	146-328	161-242					
		117-187	126-278	136-298	145-318	154-339	175-281	194					
	114	124-227	134-245	144-263	153-281	163-299	186-248						
90-135	96-176	104-191	112-206	120-221	129-236	137-251	156-208						
100-125 with 80% finer than 6-7.5 mm													
	91	98-181	106-230	114-247	122-264	130-281	148-295	163-245					
	89-119	97-209	104-226	112-243	120-259	127-276	145-242	160-187					
70-116	74-160	80-174	87-188	93-201	99-215	106-194	120-161						
51-110	54-116	58-126	63-126	68-124	72-108	77-102							
44-96	47-94	51-94	55-83	59-79	63								
		153-197	135-307	177-239	190-352	202-374	230-427	254-400	278-318				
		157-202	170-316	182-339	195-362	207-385	236-405	261-336					
		166-261	179-333	192-357	205-381	218-406	249-462	275-432	301-344				
	141	153-285	165-307	177-329	190-325	202-288	230						
115-131	122-226	132-245	124-264	153-284	163-280	174-273	198						
102-189	108-200	117-217	126-235	136-232	145-227	154-198							
			177	190-338	203-436	216-464	246-547	272-605	298-662	328-511			
			174-194	187-374	200-488	212-519	242-592	268-654	293-521	323-359			
			171-190	184-367	196-480	209-510	238-582	263-643	288-512	317-353			
			162-253	174-426	186-455	198-484	226-552	249-499	273-364				
			197-295	211-440	226-470	240-500	274-502	302-403					
		192	207-369	222-396	237-423	252-450	287-451	318-363					
		195-304	210-328	225-352	241-376	256-400	292-401	323					
		211-293	227-316	244-298	261-290								
					448-588	477-849	544-968	601-1070	658-1172	725-1291	782-1393	849-1512	906-1331
				406	433-636	461-893	525-1018	581-1125	636-1232	700-1357	756-1464	820-1461	876-1286
				380-440	406-723	432-837	492-954	544-1055	596-1155	657-1272	708-1373	769-1370	821-1206
				400-563	428-786	455-836	519-953	573-1054	628-1154	692-1271	746-1372	810-1248	865-1098
			379-424	407-716	434-765	462-814	527-928	852-942	638-789	702			
		357-395	385-656	414-704	442-752	470-800	535-912	592-857	649-718				
	280-405	304-517	328-558	352-598	376-639	400-680	455-775	503-128	551-669				
						394-459	449-1309	496-1446	543-1584	598-1745	646-1883	701-2043	748-2181
					397	422-774	482-1404	532-1552	583-1700	642-1873	693-2020	752-2193	803-2140
				342-513	365-852	389-1232	443-1404	490-1552	536-1700	591-1873	637-2020	692-2005	803-1739
			267-312	287-670	307-951	326-1106	372-1261	411-1394	450-1526	496-1681	535-1814	580-1800	720-1564
		204	220-514	237-690	253-921	269-980	306-1117	339-1235	371-1352	409-1490	441-1607	598-1396	638-1170
		248-289	268-669	287-838	307-895	326-952	372-1085	411-1165	450-1051	496-827	535-625		
		212-423	228-666	245-715	262-763	278-812	317-926	351-994	384-896	423-705	457-533		
	185-246	201-585	216-631	232-678	248-724	264-770	301-878	333-970	364-1063	401-1170	433-1010	470-862	502-669
	178-475	193-564	209-608	224-653	239-697	254-742	290-846	321-855	351-761	387-580	417		

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.

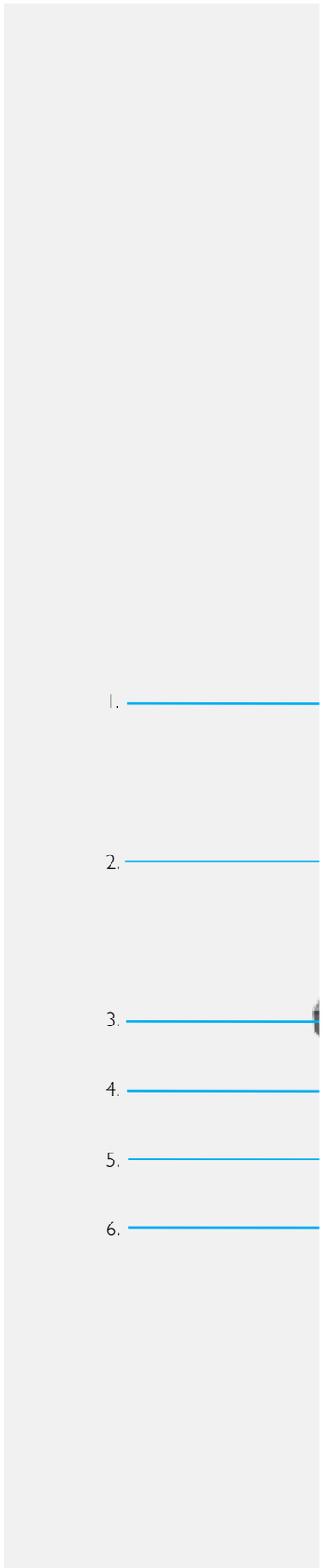
Inspection holes are provided in the bottomshell.

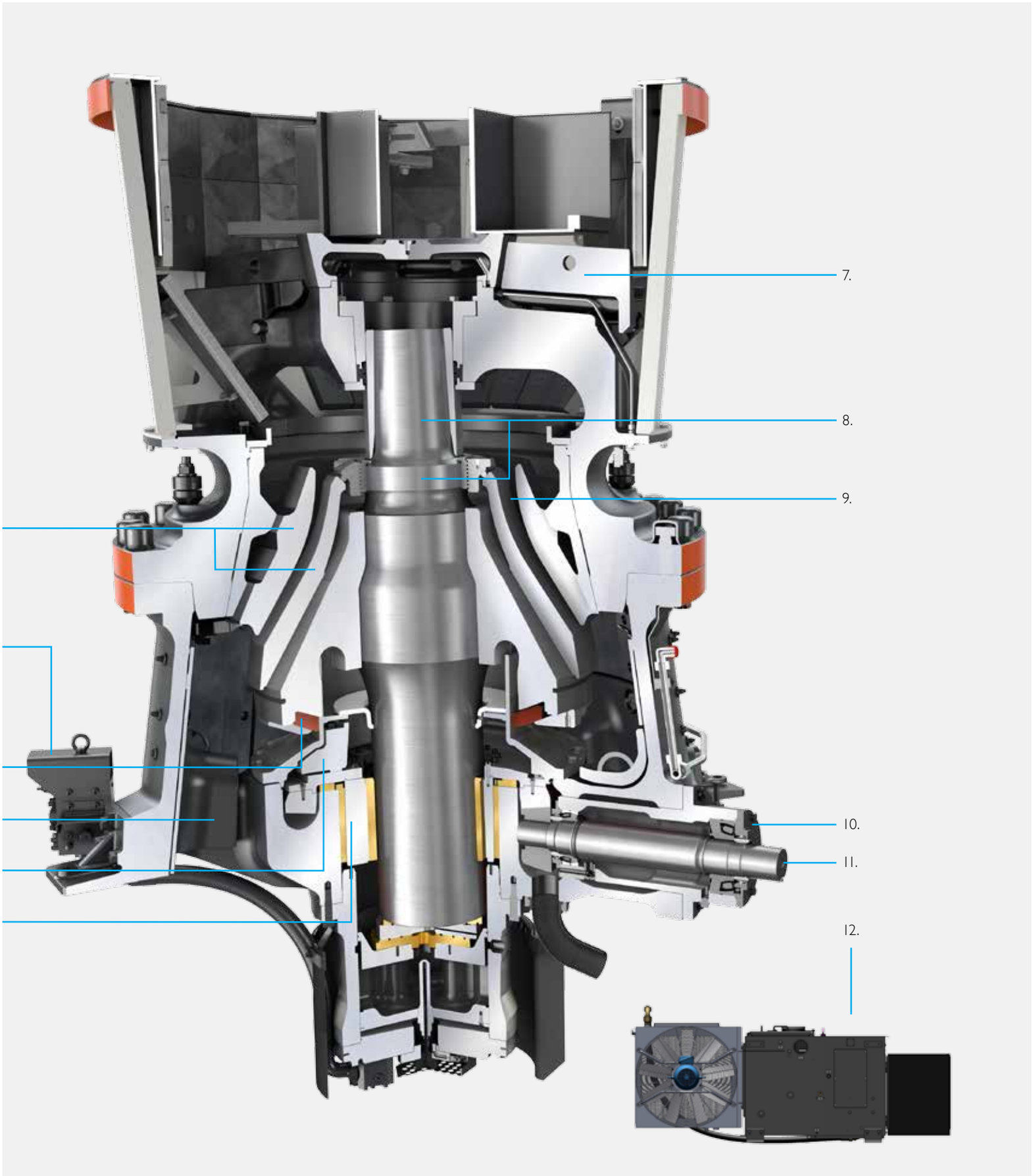
Prepared for the installation of the control system.

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 topshell arms are protected against wear by robust liners of special alloy steel.
8. Mainshaft protected by replaceable sleeve and inner headnut.
9. CLP crushing chamber design maintains feed opening throughout the entire life of the liners.
10. Easy adjustment of gear backlash.
11. Robust design of the pinionshaft assembly. The pinionshaft 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 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.

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Sandvik is a global industrial group with advanced products and world-leading positions in selected areas – tools for metal cutting, equipment and tools for the mining and construction industries, stainless materials, special alloys, metallic and ceramic resistance materials as well as process systems. In 2012 the Group had about 47,000 employees and representation in 130 countries, with annual sales of more than 98,000 MSEK.

Sandvik Construction is a business area within the Sandvik Group providing solutions for virtually any construction industry application encompassing such diverse businesses as surface rock quarrying, tunneling, excavation, demolition, road building, recycling and civil engineering. The range of products includes rock tools, drilling rigs, breakers, bulk-materials handling and crushing and screening machinery.

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