

HYDROCONE[®]

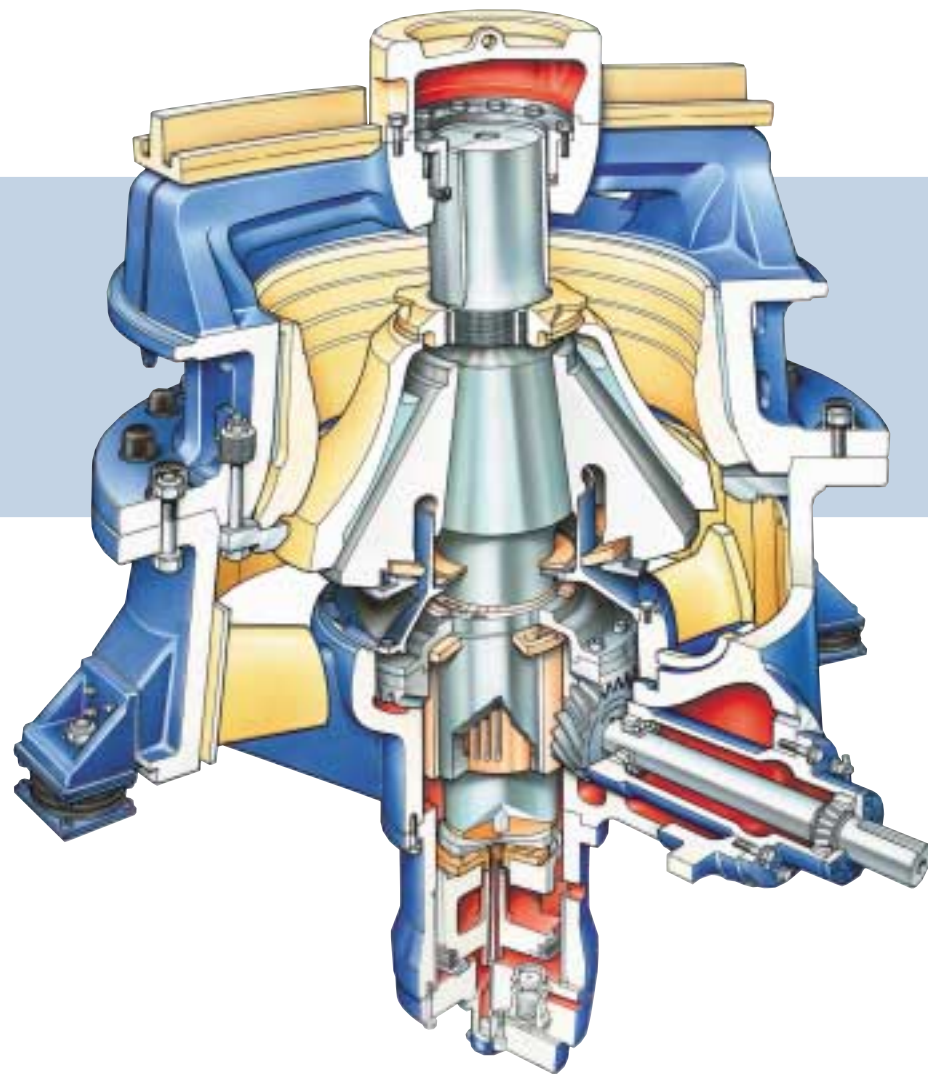
EIGHTEENHUNDRED SERIES - H&S TYPE CONE CRUSHERS



SANDVIK ROCK PROCESSING

HYDROCONE®

- **High performance – lowest total cost**
 - **Excellent versatility**
 - **Full control of the process**
 - **Easy to handle and maintain**
 - **Reliability**



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 setting regulation, ASRI

All maintenance and inspection from above – quick and easy



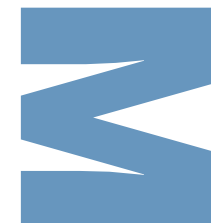
Maximizing uptime is crucial in today's competitive environment. Your equipment processes large amounts of material, and every unexpected standstill means costly production losses.



To maximize operating time, you need durable equipment that can withstand the demanding conditions of your everyday operations.



For more than a hundred years Sandvik Rock Processing has developed, manufactured and delivered state-of-the-art crushers to the international market within the mining, construction and mineral processing industries. We offer stationary and transportable crushers for all types of materials, and our equipment ranges from high-capacity primary crushers to machines for sand production.





H & S
Hydrocone

The hydraulically adjusted Hydrocone crushers manufactured by Sandvik Rock Processing are characterized by robust design and high performance. In combination with the CLP crushing chambers, high motor powers give these crushers capacities which are in most cases comparable with those of other, larger crushers. Hydrocones can be equipped with an

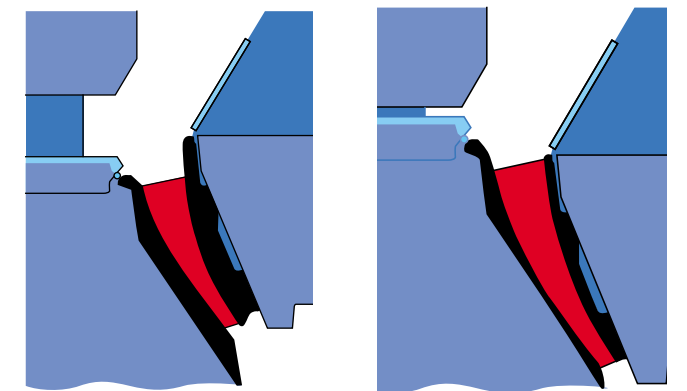


HIGH PERFORMANCE – LOWEST TOTAL COST

automatic setting system, ASRi, which can improve performance even more and also provides integration into sophisticated plant control systems.

Hydrocone crushers are ideal for secondary and tertiary crushing and the compact and easy-to-service design makes them a perfect choice for mobile installations.

CLP crushing chamber



CLP stands for Constant Liner Performance. The almost vertical profile in the feed opening area means that the shape of the chamber remains virtually unchanged throughout the wearing life.

The CLP advantages are:

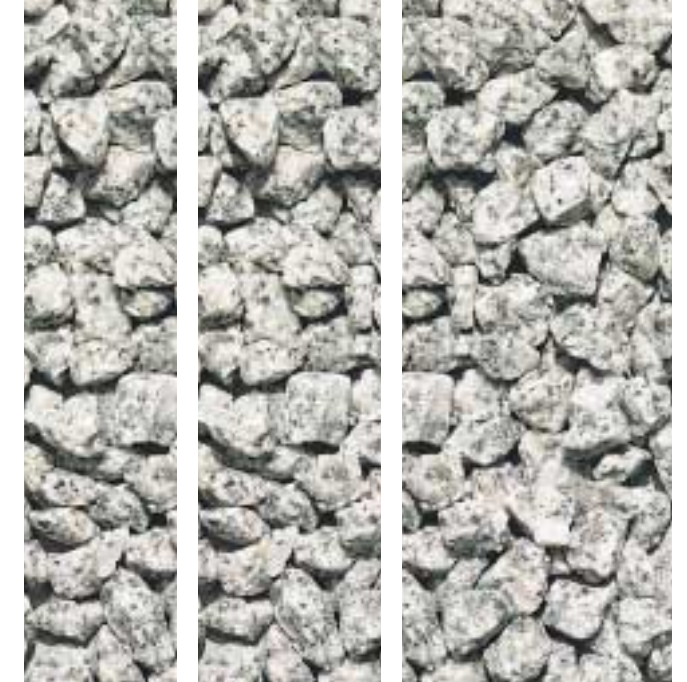
- Constant feed acceptance capability
- Increased output – High-quality products
- Increased liner life – Lowest total cost



H&S
Hydrocone

Hydrocones 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 by the proper selection of crushing chamber and eccentric throw.



EXCELLENT VERSATILITY

Hydrocones 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.

Hydrocone crushers meet exacting product quality demands. Aggregate specifications have been tightened up and this trend towards higher standards will continue. The Hydrocone crushers and the CSC (cubical shape crushing) technique developed by us, produce material of excellent shape and high quality.



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.



H&S
Hydrocone

The Hydroset system provides both 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 by allowing the mainshaft to the mantle to drop, to per-



FULL CONTROL OF THE PROCESS

mit the passage of tramp iron and other uncrushable material. The system then automatically returns the mainshaft smoothly to its original position.

If the Hydrocone is equipped with our automatic setting system, ASRi, the actual crushing load inside the crusher is continually monitored. This makes it possible to optimize crusher utilization allowing you to squeeze the ultimate performance from your machine at all times.

Crushers with a performance potential like the H-8800 are almost always incorporated into automated process control systems. These large crushers are therefore delivered from the factory with the ASRi automatic setting regulation system as standard equipment.



The crushers can be equipped with ASRi, an Automatic Setting Regulation system, which monitors the load on the crusher. This gives considerably improved results and optimum crusher utilization. Ask for a separate description of the ASRi system.

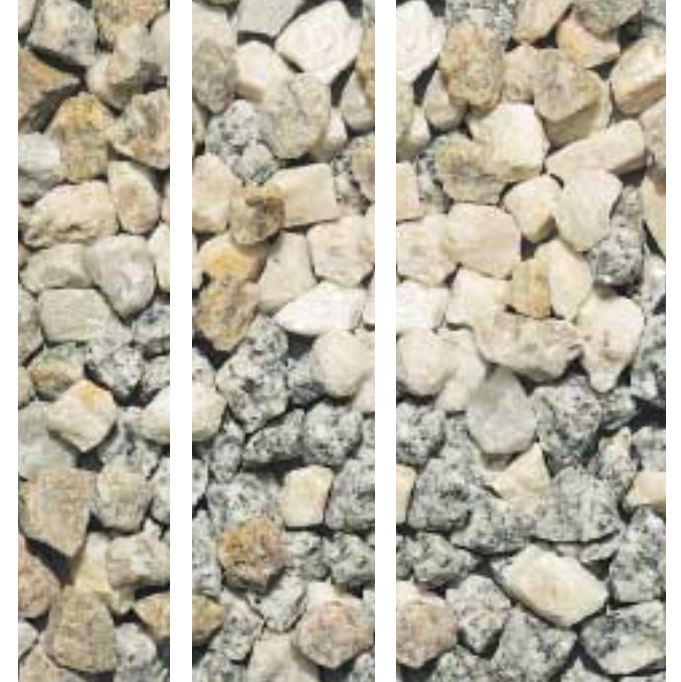


SANDVIK
Sandvik Rock Processing

H & S
Hydrocone

Much attention has been paid to making Hydrocone 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.

Improved sealing to the inner crusher mechanics provides more effective pro-

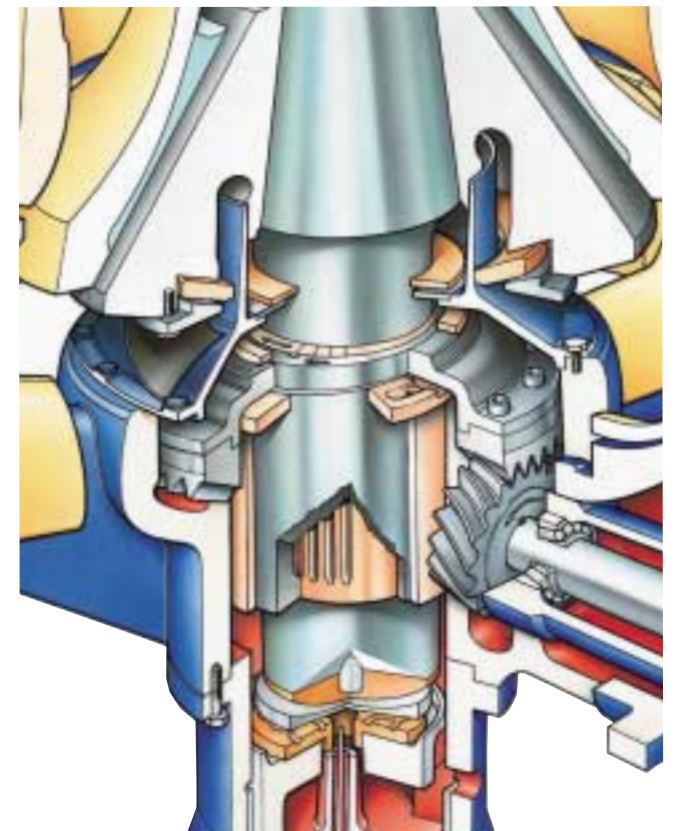


EASY TO HANDLE AND MAINTAIN

tection against dust and other unwanted particles – reducing maintenance and increasing the life of the crusher.

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

In addition to the high capacity, Hydrocones are compact, which makes them very easy to move and to install.



To ensure optimum operation efficiency and a long life for your equipment, always use Sandvik original wear and spare parts.

Don't compromise. Original parts pay off!



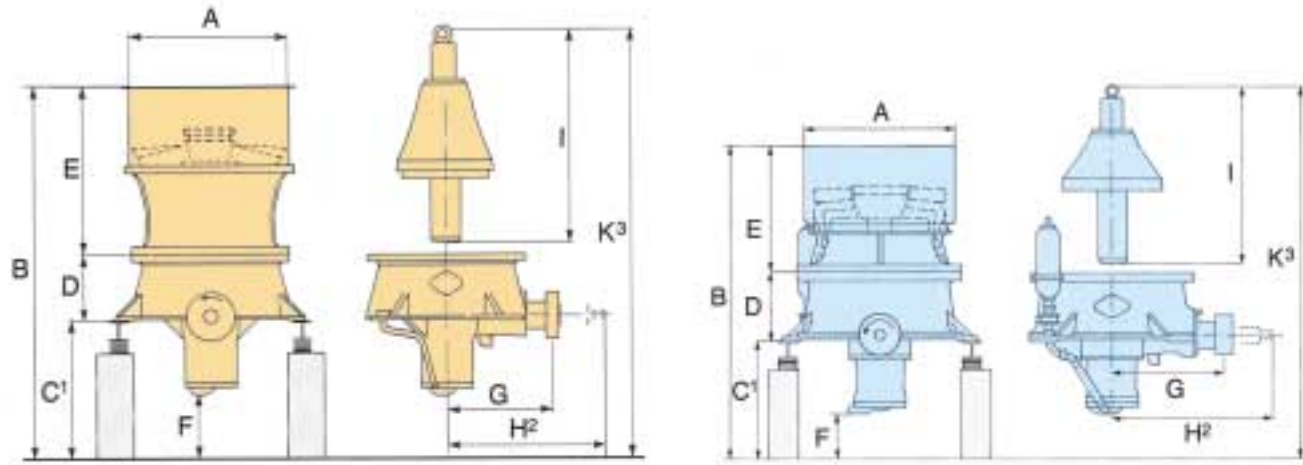
**DON'T COMPROMISE.
ORIGINAL PARTS PAY OFF!**

H&S
Hydrocone

SPECIFICATIONS



DIMENSIONS, mm



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

Dim.	S2800	S3800	S4800	S6800	H2800	H3800	H4800	H6800	H8800
A	Ø 1420	Ø 1770	Ø 2150	Ø 2800	Ø 980	Ø 1360	Ø 1540	Ø 1950	Ø 2750
B	2900	3490	4080	5100	2560	2990	3410	4220	5820
C¹	1020	1130	1300	1600	1020	1130	1300	1600	2330
D	540	660	750	860	540	660	750	860	1190
E	1340	1710	2030	2640	1000	1210	1370	1760	2300
F	400	420	450	630	400	420	450	630	580
G	840	1060	1280	1500	840	1060	1280	1500	1960
H²	1270	1680	1840	2160	1270	1680	1840	2160	3100
I	1700	2050	2420	2900	1430	1690	1990	2340	3480
K³	3370	3930	4600	5360	3000	3570	4100	4840	7200

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

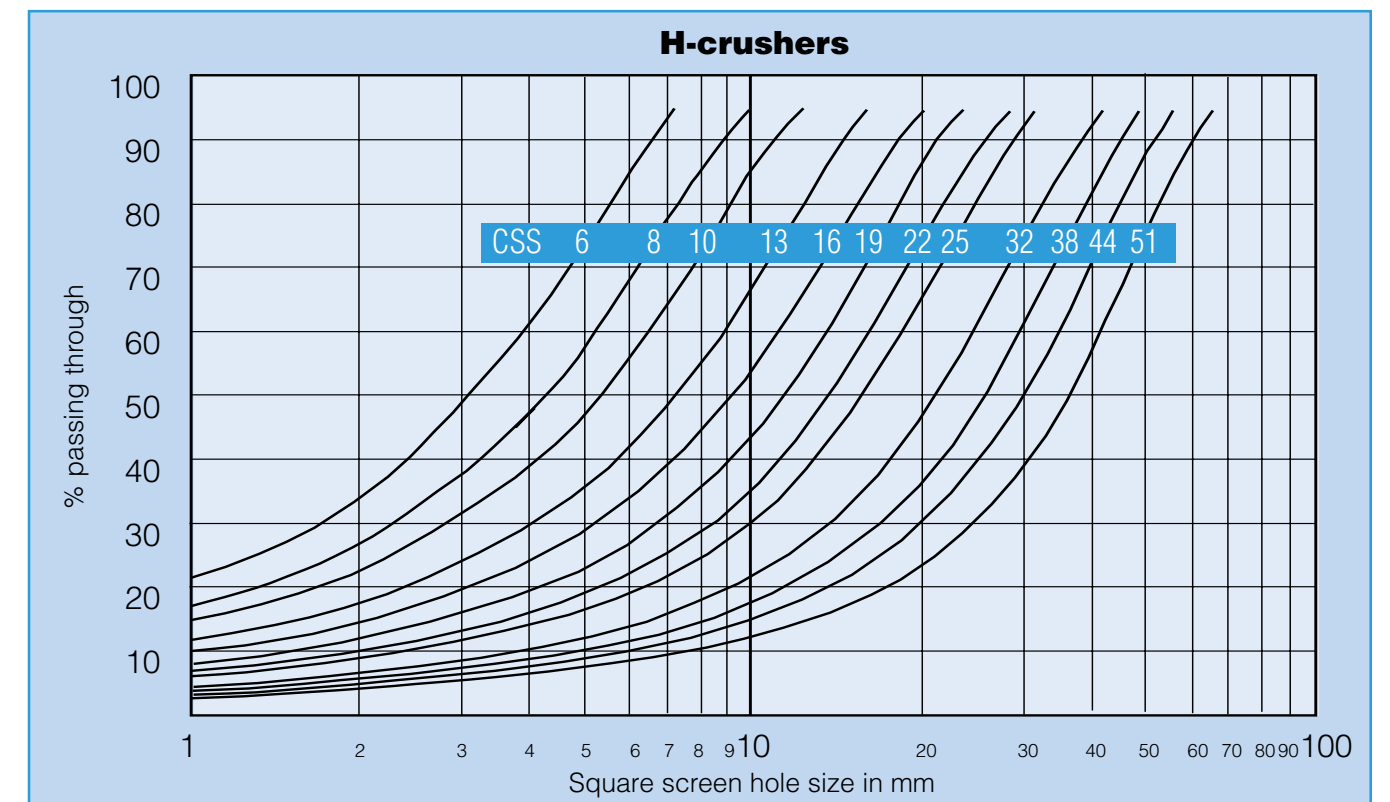
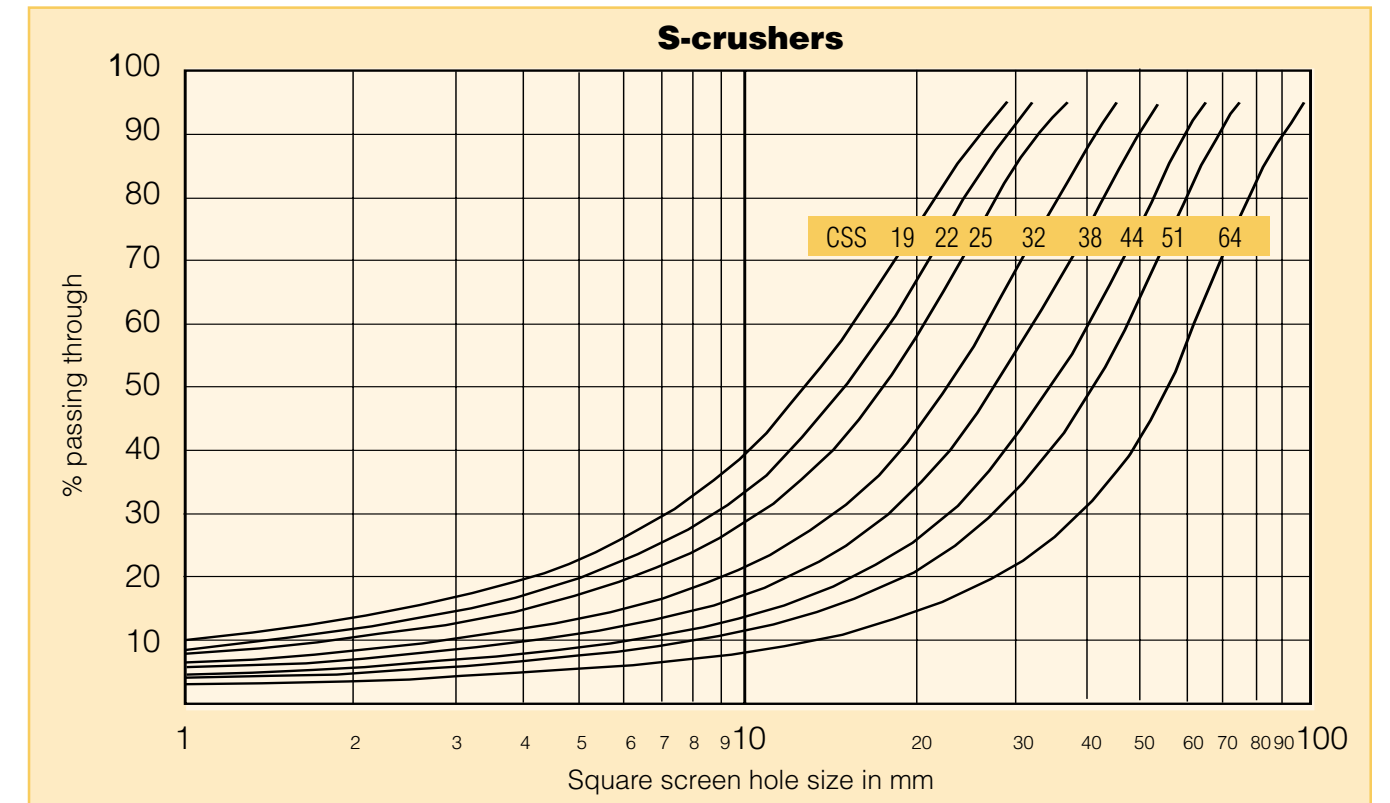
	S2800	S3800	S4800	S6800	H2800	H3800	H4800	H6800	H8800
Heaviest lift during maintenance	2300	5100	8100	16500*	1400	2900**	4700**	7300**	22000**
Total weight	6800	12000	19300	36500	5300	9200	14300**	23500**	70000**

* 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 H3800, by 600 kg for the H4800 model, by 600 kg for the H6800 and by 380 kg for the H8800 Hydrocone.

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.



CRUSHING CHAMBERS

S-crushers:

Two standard crushing chambers are available

C = Coarse

EC = Extra coarse

H-crushers:

Several standard crushing chambers are available:

EF = Extra fine

F = Fine

MF = Medium fine

M = Medium

MC = Medium coarse

C = Coarse

EC = Extra coarse.

CAPACITY, MTPH

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

They apply for 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 (W_c), 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.

S-crushers	Max motorsize kW	Max feedsize mm	Nominal capacity in t/h with crusher running at CSS mm												
			16	19	22	25	29	32	35	38	41	44	51	54	
S2800	90	EC	240		80 - 90	85 - 100	90 - 130	100 - 180	105 - 195	115 - 165	120 - 170				
		C	200	65 - 75	70 - 80	75 - 110	80 - 145	90 - 130	95 - 130						
S3800	150	EC	360			115 - 135	125 - 145	140 - 200	145 - 265	155 - 280	165 - 355	175 - 375	185 - 395	205 - 295	215 - 245
		C	300		100 - 115	110 - 155	115 - 165	125 - 230	135 - 290	145 - 310	150 - 330	160 - 345	170 - 305		
S-crushers	Max motorsize kW	Max feedsize mm	Nominal capacity in t/h with crusher running att CSS mm												
			25	29	32	35	41	44	51	54	60	64	70	76	
S4800	220	EC	450				267	298 - 446	313 - 563	349 - 524	365 - 456				
		C	400			239 - 299	254 - 381	284 - 511	298 - 448	333					
S6800	315	EC	560			295 - 340	315 - 360	349	368 - 460	410 - 718	428 - 856	465 - 929	489 - 978	525 - 1050	562 - 983
		C	500					336 - 420	353 - 618	394 - 788	411 - 823	446 - 892	469 - 822	504 - 631	

H-crushers	Max motorsize kW	Max feedsize mm	Nominal capacity in t/h with crusher running at CSS mm													
			4	6	8	10	13	16	19	22	25	32	38	44	51	
H2800	90	EC	130				45 - 55	50 - 100	55 - 105	60 - 115	60 - 120	65 - 130	75 - 145			
		C	90				45 - 60	45 - 105	50 - 110	55 - 120	55 - 125	60 - 135	70 - 80			
		M	64			35 - 50	40 - 85	40 - 90	45 - 90	50 - 70						
		MF	48		35 - 40	40 - 75	40 - 80	45 - 80	45 - 60							
		F	38	25 - 40	30 - 60	30 - 60	30 - 65	35 - 55	40 - 45							
		EF	18	30-40 with 80 % finer than 4.5-5.5 mm												
H3800	150	EC	190				70 - 125	75 - 170	80 - 185	85 - 195	90 - 210	105 - 240	115 - 240			
		C	145				70 - 85	65 - 150	70 - 165	75 - 175	80 - 185	85 - 200	100 - 225	110 - 170		
		MC	115				55 - 65	60 - 160	65 - 175	70 - 185	75 - 200	80 - 210	95 - 165			
		M	90			60 - 75	65 - 100	70 - 150	75 - 165	80 - 175	85 - 185	90 - 175	105 - 120			
		MF	65			60 - 70	65 - 120	70 - 130	75 - 145	80 - 145	85 - 130	90 - 105				
		F	50		50 - 90	50 - 95	55 - 100	60 - 110	65 - 120	70 - 120	70 - 110	75 - 90				
EF	26	70-90 with 80 % finer than 5-5.6 mm														
H4800	220	EC	210					114 - 200	122 - 276	131 - 294	139 - 313	159 - 357	175 - 395	192 - 384		
		C	170				101	109 - 218	117 - 292	125 - 312	133 - 332	151 - 378	167 - 335	183 - 229		
		MC	140				97 - 122	105 - 262	113 - 282	120 - 301	128 - 320	146 - 328	161 - 242			
		M	105				117 - 187	126 - 278	136 - 298	145 - 318	154 - 339	176 - 281	194			
		MF	80				114	124 - 227	134 - 245	144 - 263	153 - 281	163 - 299	186 - 248			
		F	65			90 - 135	96 - 176	104 - 191	112 - 206	120 - 221	129 - 236	137 - 251	156 - 208			
EF	35	100-125 with 80 % finer than 6-7.5 mm														
H6800	315	EC	300					177	190 - 338	203 - 436	216 - 464	246 - 547	272 - 605	298 - 662	328 - 511	
		C	210					171 - 190	184 - 367	196 - 480	209 - 510	238 - 582	263 - 643	288 - 512	317 - 353	
		MC	170					162 - 253	174 - 426	186 - 455	198 - 484	226 - 552	249 - 499	273 - 364		
		M	130					197 - 295	211 - 440	226 - 470	240 - 500	274 - 502	302 - 403			
		MF	100				192	207 - 369	222 - 396	237 - 423	252 - 450	287 - 451	318 - 363			
		F	75				195 - 304	210 - 328	225 - 352	241 - 376	256 - 400	292 - 401	323			
EF	55				211 - 293	227 - 316	244 - 298	261 - 290								
H8800	600	EC	460								480 - 640	547 - 1277	605 - 1411	662 - 1546	730 - 1702	
		C	340								540 - 772	616 - 1232	681 - 1362	746 - 1492	821 - 1643	
		MC	250								541	576 - 864	657 - 1231	726 - 1361	795 - 1490	876 - 1642
		M	180								552 - 613	587 - 1043	669 - 1189	739 - 1314	810 - 1440	892 - 1586
		MF	120							514	549 - 933	584 - 993	666 - 1132	736 - 1251	806 - 1370	888 - 1420
		F	80						531	570 - 832	609 - 888	648 - 945	739 - 985	816 - 885		
EF	50				364 - 420	395 - 532	426 - 574	458 - 616	489 - 658	520 - 700	593 - 798	655 - 882	718 - 883	790		

FEATURES WHICH MAKE OUR HYDROCONE CRUSHERS THE BEST CONE CRUSHERS 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.

Long life from liners of special alloy manganese steel.

An automatic overload protection system is standard. The H-8800 has a pressure limiting valve. Other sizes have an accumulator.

Inspection holes are provided in the bottomshell.

The interior of the crusher is protected from dust by a self-lubricating seal ring.

The bottomshell arms have liners of special alloy steel.

Quiet operation and long life thanks to bevel gears with hardened, spiral-cut teeth.

Product curve and capacity can be optimized by adjusting the eccentric bushing supplied with the crusher.

Prepared for the installation of ASRi, the Automatic Setting Regulation system.

Large feed opening. The two topshell arms are protected against wear by robust liners of special alloy steel.

Mainshaft protected by replaceable sleeve and inner headnut.

CLP crushing chamber design maintains feed opening throughout the entire life of the liners.

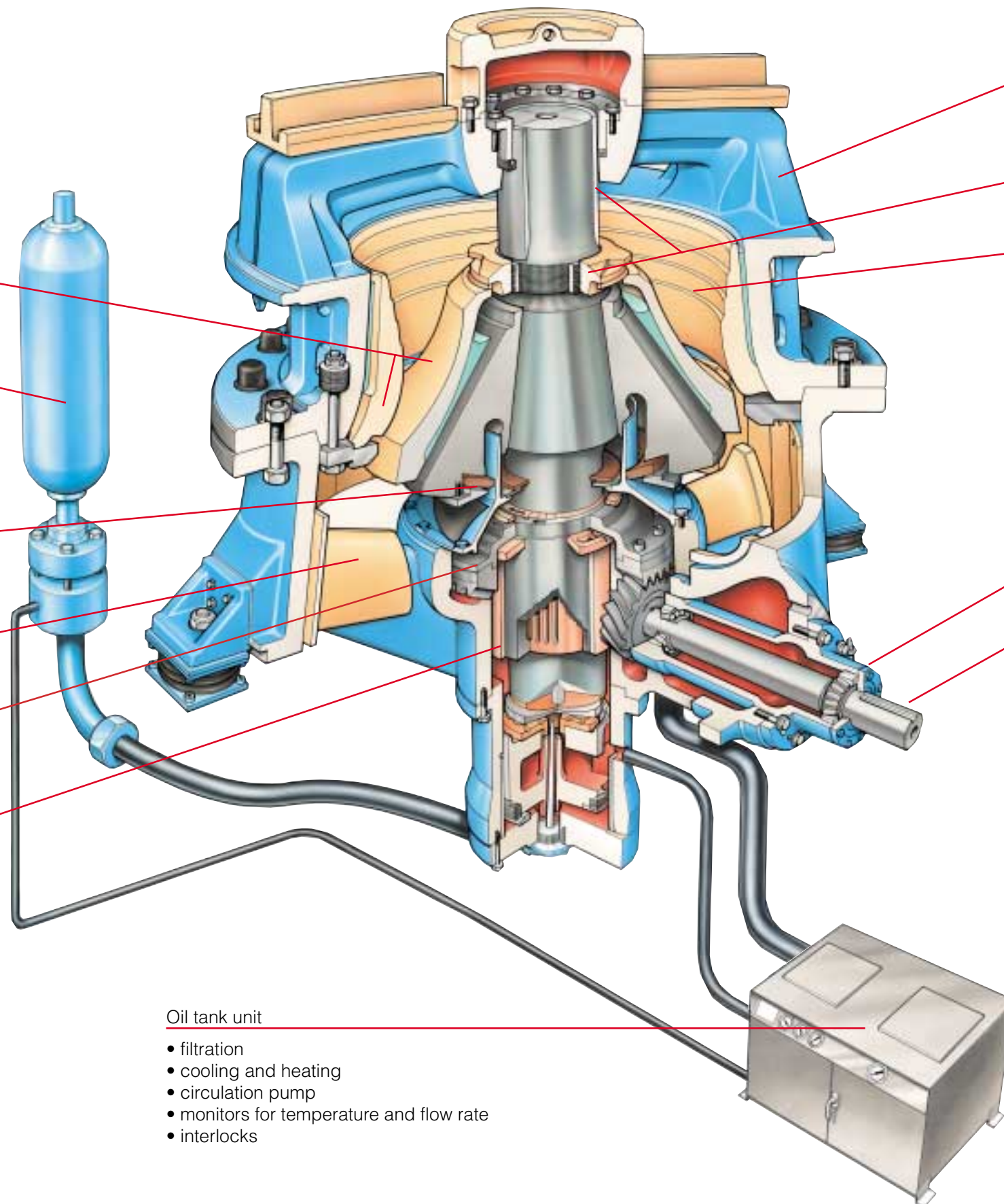
Rugged design provides the strength and stability necessary for the crushing of extra-hard materials. The design also results in low maintenance costs.

Easy adjustment of gear backlash.

Rugged 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.

Lubrication

- A Separate lubrication for the spider bearing.
- B 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.
- C The pinionshaft unit has separate lubrication.



Oil tank unit

- filtration
- cooling and heating
- circulation pump
- monitors for temperature and flow rate
- interlocks



HYDROCONE®: Ideal for secondary and tertiary crushing, this crusher is characterised by its robust design, reliability and high performance. Hydrocone can also be equipped with an automatic crusher control system.



JAWMASTER™: Characterized by attention to detail in design and manufacture. The ideal crusher to choose when high production and low total cost are in focus.



MERLIN-VSI®: An advanced vertical shaft impact crusher, designed mainly, but not exclusively, for crushing abrasive and hard materials: such as in sand and gravel plants, industrial minerals, mining and recycling.



IMPACTMASTER™: An impact crusher best suited to primary, secondary and recycling applications. Allows high product reduction and provides quality products (cubicity).

Sandvik is a high-technology engineering Group with advanced products and a world-leading position within selected niches; tools for metalworking, machinery, tools for rock-excitation, products in stainless steel, special alloys, high-temperature materials and process systems. Sandvik Rock Processing is a product area within Sandvik Mining and Construction and manufactures products for the mining and construction industry; crushers, screens, feeders, mobile crushers and screening stations. Worldwide business activities are conducted through 300 companies and representation in 130 countries.

