

RollSizers

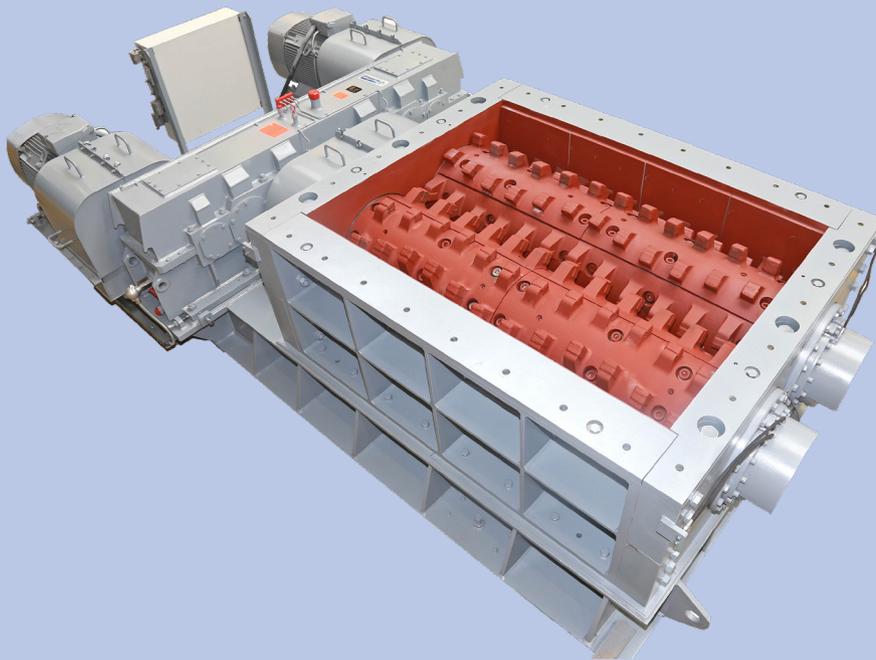
High-performance crushing with a difference



FLS

Your high-performance, easy-maintenance sizing solution

Our Double RollSizer offers you more advantages than ever before. Whether it is the wear and energy saving operation or the optimised product, it consistently delivers you quality throughout. Thanks to its flexibility, the Double RollSizer is highly suitable for both brownfield expansions and greenfield installations. The wide portfolio variety enables numerous applications from soft to medium hard material for mining and construction.



Key benefits

- Optimised product with sizes down to 30 mm possible
- Wear and energy saving due to pre-screening between the rolls
- High operational safety even under harshest conditions
- Easy maintenance

Crushing solutions for the hardest jobs

When it comes to the crunch, you need a crushing system that delivers the ultimate in performance, reliability and cost-efficiency. With FLS by your side, you can expect the optimum, customised solution for even the most demanding of jobs.

When you call on our services, you can count on a wealth of experience and a constant drive to find the right solution for your application. As a leading manufacturer of machines and plants for the aggregates and mining industry, we supply well-engineered crushing systems that have stood the test of time in the hardest service conditions. At the same time, we invest in intensive research and development work to make proven solutions even better and to adapt to changing demands.

Whether you need a standard or customised design, we can provide the optimum solution for your application. We act on your specific requirements and adapt our systems to suit the material to be crushed and the product size required, optimising proven technology according to your specifications. And whatever your application, you get the same great benefits: high throughput, low costs, minimum maintenance, easy operation and maximum reliability.

Semi-mobile RollSizer crushing plant, DRS 660 x 1,500 CenterSizer, for the primary crushing of limestone. Throughput rate is 550 tph.



Fields of application and design characteristics

RollSizers are used for primary, secondary and tertiary crushing of medium-hard as well as sticky and soft materials.

The low height of the RollSizer is optimally designed for easy integration into existing crushing plants, whether mobile, semi-mobile or stationary. In addition to the standard model, we also offers variants tailored to meet your specific challenges.

RollSizers can be designed for up to 10,000 tph, depending on the material to be crushed and the required throughput rate.

Applications

- Limestone and cement industries
- Natural stone industry
- Mineral processing

Features

- Reliable, rugged, high-performance technology
- Compact, flat design
- Low fines content in the crushed product due to the low circumferential speed of the rolls
- Reduced dust generation compared to other crushing methods
- High shear and tensile forces at a low crushing roll speed
- Crusher and grizzly combined in one machine
- High throughput rates at low operating costs
- Low wear due to optimised geometry of crushing tools and careful selection of materials used in their manufacture
- Low-wear crushing method (bending and tensile forces, low circumferential speeds)
- Reversible operation

Operating principle of the CenterSizer

The CenterSizer crushes the feed material between the crushing teeth in the middle of the crushing chamber.

The shear and tensile forces required are generated by high rotor torques at low circumferential speeds. The crushing tools are configured to allow the fines contained in the feed material to pass between the crushing rolls without being crushed any further, in a similar manner to a screening process. The specific power requirement, wear rate and fines content in the end product are thus much lower compared to other crushers.

CenterSizers for primary and secondary crushing

CenterSizers produce a clearly defined product size with a low oversize content and can be used for a required final grain size of up to approx. 50 mm. The crushing ratio that can be achieved with CenterSizers ranges between 3:1 and 6:1 depending on the design and application. There are various types of CenterSizer available, allowing throughput rates of up to 10,000 tph to be achieved using feed lumps with edge lengths of up to 2,000 mm.

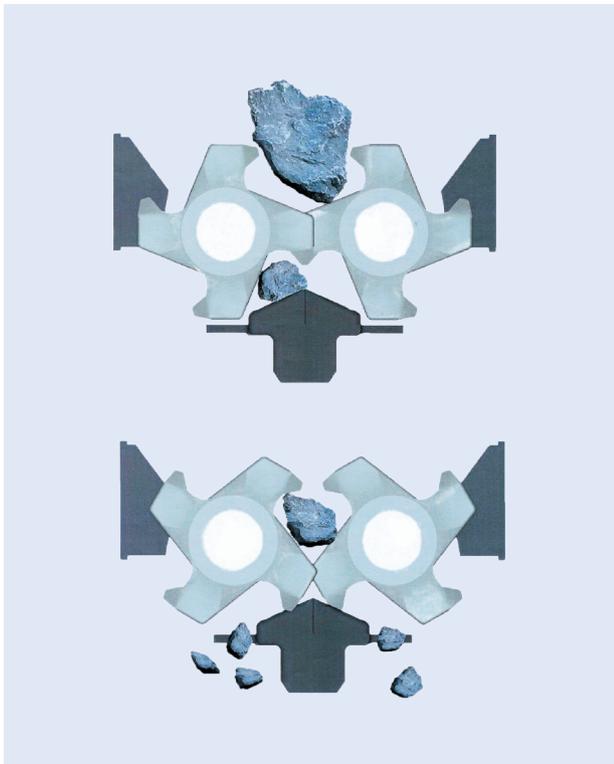
CenterSizer and SideSizer drives

The crushing rolls are driven either by a synchronisation stage and one drive train or by two independent drive trains. The electrical or hydraulic drive trains can be arranged on one or on both sides of the crusher housing.

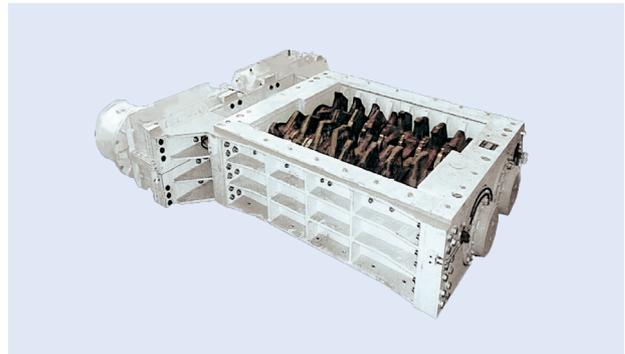
CenterSizer crushing tools

The design of the crushing chamber (arrow or spiral arrangement of the crushing tools) and the systems for attaching the crushing teeth are selected to suit the application and the arrangement of the CenterSizer in relation to the flow of material. Two options are available: replaceable tooth picks and fully replaceable teeth rings.

The materials used for our crushing tools are selected according to your application, so you get the longest possible service life.



Crushing principle of the CenterSizer with breaker bar



RollSizer DRS 660 x 2,000 designed as a CenterSizer for primary crushing



RollSizer DRS 660 x 1,500 designed as CenterSizer for secondary crushing

Operating principle of the SideSizer

The SideSizer crushes the feed material between the crushing teeth and the adjustable crushing combs arranged at the longitudinal sides.

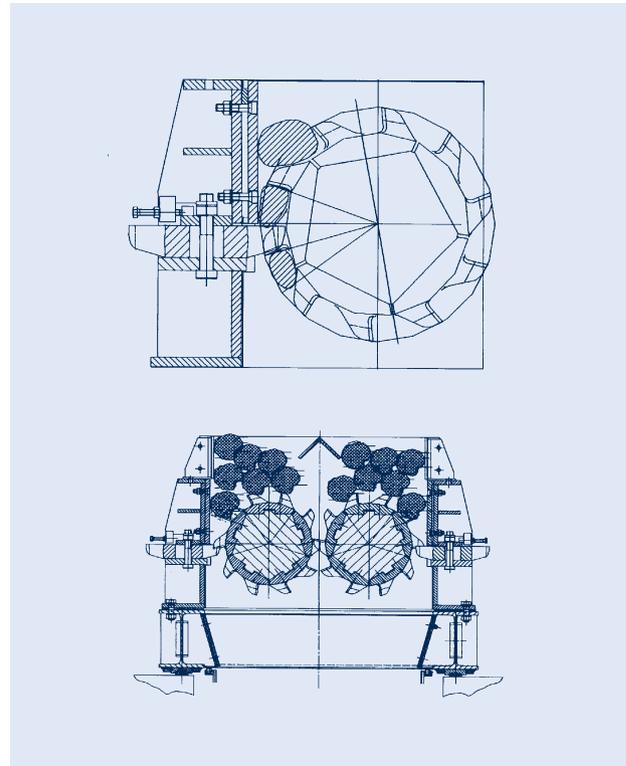
Fine feed material can also pass through the rolls without further crushing, resulting in an extremely low fines and dust content in the finished product. As in the CenterSizer, the material is crushed by means of shear and tensile forces as well as additional cutting forces generated by high rotor torques at low circumferential speeds.

SideSizers for secondary and tertiary crushing

Due to the precisely determined geometry of the lateral crushing comb, SideSizers produce a clearly defined product size and can be used for a required final grain size of up to approx. 30 mm. The additional adjustability of the crushing combs ensures a highly flexible range in the final product size. The crushing ratio that can be achieved with SideSizers ranges between 3:1 and 4:1 depending on the design and application. There are various types of SideSizer available, allowing throughput rates of up to 2,500 tph to be achieved.

Crushing tools for the SideSizer

Easily replaceable toothed segments as well as toothed combs are the preferred option for the SideSizer. And of course, the materials used for the SideSizer are also selected according to the application in order to ensure the longest possible service life and low operating costs.



Crushing principle of the SideSizer

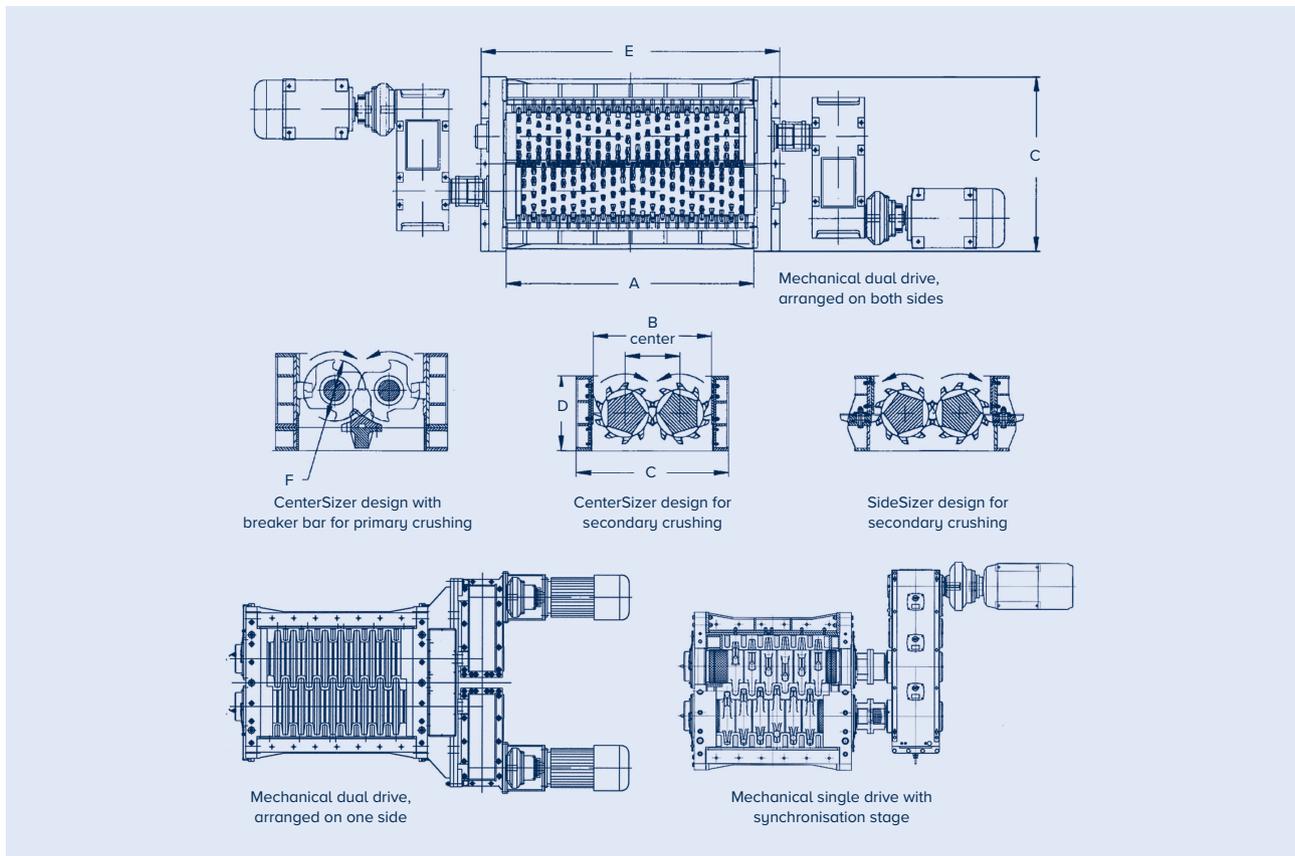


RollSizer DRS 660 x 3,000 designed as a SideSizer for secondary crushing

Technical data

Type	A	B	C	D	E	F	Max. feed size ¹⁾	Throughput rate	Total installed power	RollSizer weight ²⁾
							CenterSizer (SideSizer)			
	Approx.	Approx.	Approx.	Approx.	Approx.	Tip Ø approx.	[mm]	[t/h]	[kW]	Approx. [t]
500	1,000	1,100	1,500	600	1,660	590	480-650 (200)	to 1,500	55-220	4
	1,500				2,100					5
	2,000				2,600					7
660	1,500	1,500	2,200	900	2,300	750	650-850 (300)	to 2,500	160-500	17
	2,000				2,900					20
	3,000				3,900					25
800	1,500	1,800	2,400	1,100	2,500	920	750-1,050	to 3,500	200-630	27
	2,000				3,100					32
	3,000				4,100					40
1,000	2,000	2,100	2,600	1,300	3,200	1,020	950-1,300	to 5,000	250-700	42
	3,000				4,200					51
1,250	2,000	2,800	3,600	1,600	3,700	1,450	1,200-1,600	to 7,500	450-800	81
	3,000				4,700					100
1,500	3,000	3,550	4,400	2,000	3,700	1,800	1,400-2,000	to 10,000	750-1,200	125
	4,000				4,700					150

1. Max. feed size depends on tooth configuration.
2. Weight of the RollSizer without drive. The throughput rate and motor power depend on the feed material, feed size, granulometric composition and required product size. The given data are intended as a guide for medium-hard limestone (fines content of 50% in the feed material) and are based on a crushing ratio of 5:1. Subject to change! (Throughput by way of example based on a bulk density of 1.6 t/m³).



Comprehensive, tailored services

We know your crushing operation is essential to your ongoing productivity. So, to ensure the best possible performance and availability, we offer a range of services, from the engineering of individual crushers and entire plants to their operation and modification if needed.

We usually start out by analysing the storage areas and the feed material. Using state-of-the-art processes we characterise the respective material, which forms the basis for selecting the right crusher and any customer-specific adaptations that may be required. Then we perform testing under field conditions using a clever control and diagnostic system to check the main operating parameters again.

Whenever you need us, our maintenance and repair crews are on hand. From specialist advice, inspections and modifications to modernisations, performance enhancement, damage analyses and repairs, which are performed exclusively by our highly qualified assembly personnel using high-quality, certified spare parts. If necessary, we will maintain and repair your crusher at one of our service centers. You can call on these services not only for crushers from our own production lines, but also for machines manufactured by other suppliers.

Increase the productivity of your machines and plants. Call on our service team today.

One-stop-shop service



360° engineering consulting



Asset management



Spare parts supply and management



Service center and field services



Revamps



Installation of a RollSizer

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