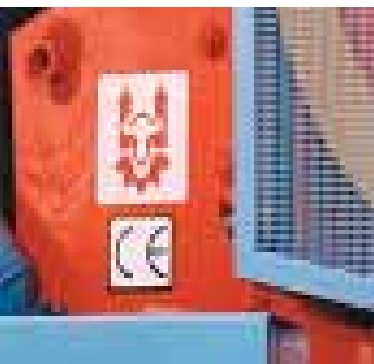




CONE CRUSHERS

- high operating reliability
- low costs for operation and maintenance
- simple attendance and maintenance



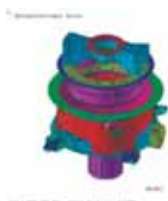


Cone crushers KDC, lowering of operating costs continues

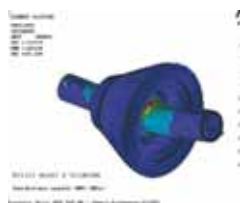
CRUSHING



Cone crusher KDC 32 FP—gravel crushing



Computing analysis of a cone crusher KDC. Finite element method model (shell element).



Computing analysis of a cone with the shaft for the cone crusher KDC. Stress in the solid model.



Cone crusher assembly

A new line of compact cone crushers KDC has been developed by PSP Engineering as an upgrade to the existing crushers KDH. In our testing facilities and in the field, the KDC line achieves high capacity parameters while maintaining lower operating cost, high reliability as well as simple maintenance and operation.

The capacity of crushers KDC ranges from several ten to more than 800 tons of crushed material per hour. Each crusher size can be supplied in several variants varying in dimensions of the inlet opening. The crushers are fitted with hydraulic device that allows effortless adjustment of the outlet setting and

easy discharge of the crushing space after congestion. The crusher internals protect the machine against damage from overloading or if a non-crushable piece passes through.

Hydraulic cone crushers KDC are used for secondary and tertiary crushing of hard, abrasive, non-sticking materials with compression strength of up to 400 MPa such as quartz, granite or basalt. The crushers KDC are usually supplied with a common frame and drive seated on rubber springs in order to reduce the dynamic loads on the supporting structure underneath the crusher.

Basic characteristics of the crusher line KDC:

- High operating reliability
- Low cost for operating and maintenance
- Rugged design
- Exceptional degree of comminution
- Simple maintenance
- Simple operation
- High variability
- Easy adjustment of the crushing setting
- Easy discharge of the crushing chamber after congestion
- Ideal geometry of the crushing chamber
- Simple integration of the crusher into automated production lines
- Remote monitoring of the operation via internet
- High quality of the final product (grain size distribution and shape value)
- Crushing elements with a high percentage of manganese
- Rugged main shaft made of chrome-vanadium steel
- Automated operation
- Bevel gear with spiral teeth



Computing analysis of a cone crusher KDC. Displacements in the solid model

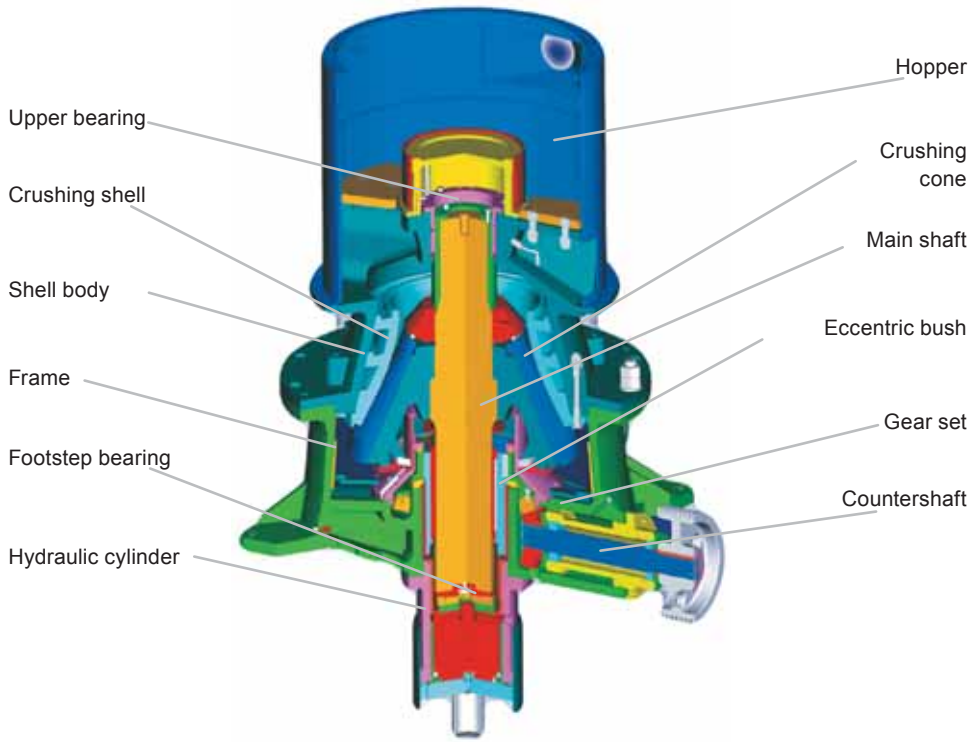


3D model of a crusher KDC stand and body. Control computer display



Crushers KDC are equipped with the control system COMPACT. COMPACT simplifies the operation and allows for a maximum utilization of the crusher capacity. It is capable to change parameters on-line, increase the quality of the product and to monitor the operating parameters such as the pressure in the hydraulic circuit, power input of the drive, size of the outlet slot and temperature of lubricating oil. The control system continuously processes these parameters and optimizes the crusher operation according to its values. Possible failures are monitored and recorded.

Cone crushers KDC, lowering of operating costs continues

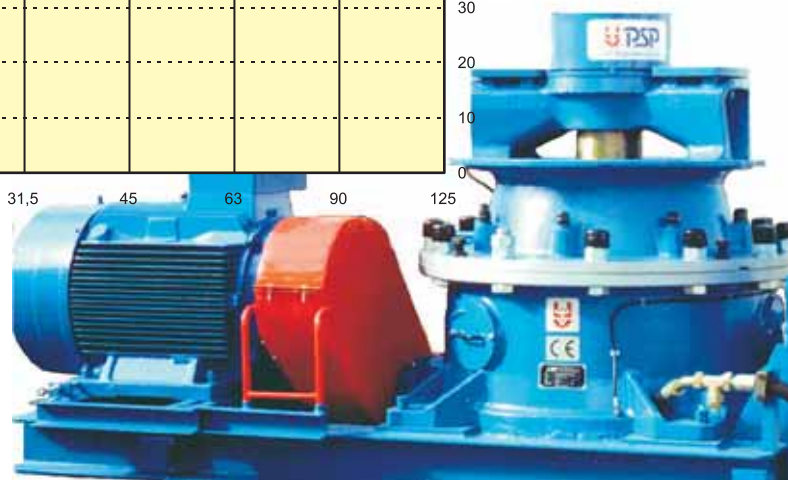
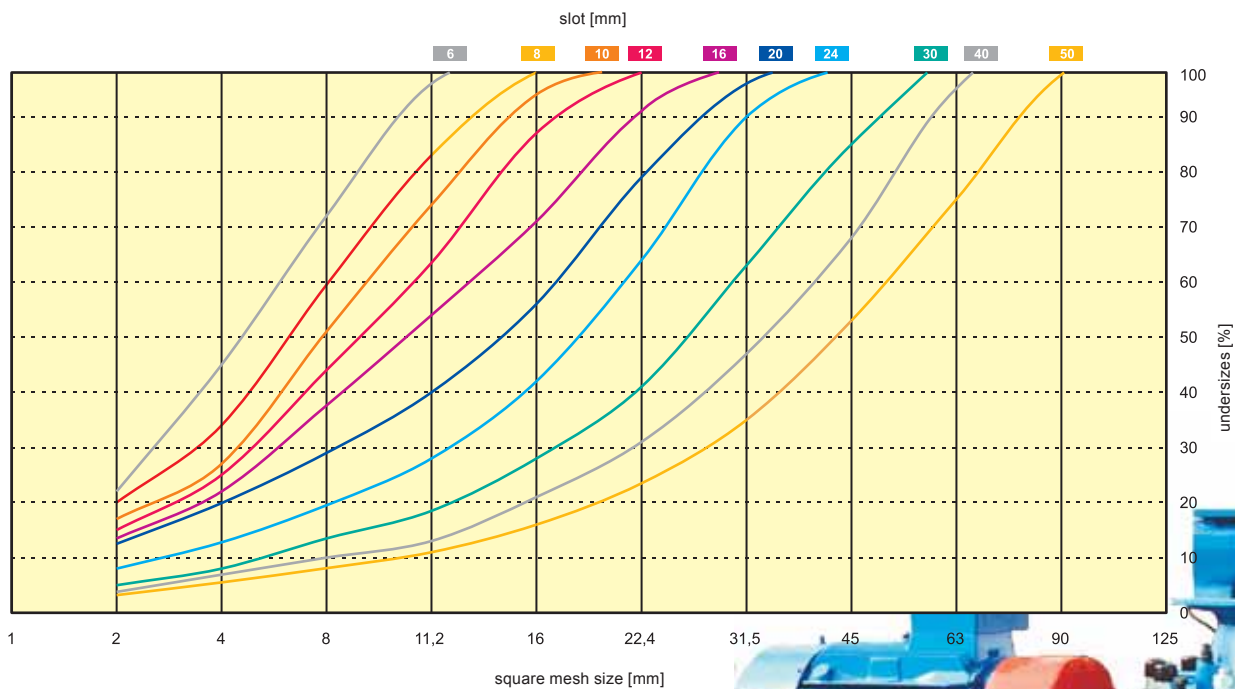


CRUSHING



KDC 35 FP – greywacke crushing

Grain size distribution of the product for medium crushable material





Cone crushers KDC, lowering of operating costs continues

CRUSHING



Crushing chamber of the secondary crusher



Crushing chamber of the tertiary crusher



Cone crusher KDC 33 GP – chert crushing



Cone crusher KDC 36 GP – basalt crushing

Constant crushing space of the cone crusher KDC

Cone crushers KDC have advanced crushing chambers that keep the final product parameters uniform. The crushing chamber is of a curved design with the vertical area of the opening at the inlet remaining constant almost throughout the service life of crushing elements. This design maintains a constant high output level without changing the product parameters.

Crushing elements, except for the KDC 26xx and 36xx, are not grouted and can be easily and quickly exchanged. The fact that no potant is used shortens the shutdown time and lowers the dependence on climatic conditions. In case of freezing, it is possible to exchange worn crushing elements outside the heated area.

Crusher shells with big rings can be used repeatedly. The independent rings improve the seating of the crusher casing along the entire height of the casing body.

The size of inlet openings of tertiary crushers corresponds to the aggregate passing through screens of 32, 63, 90, 120 and 150 mm. The shape design of crushing chambers with secondary and tertiary crushers KDC results in a higher quality of the final product and lower operating costs by reducing wear of the crushing elements.

Principle parameters of secondary crushers KDC

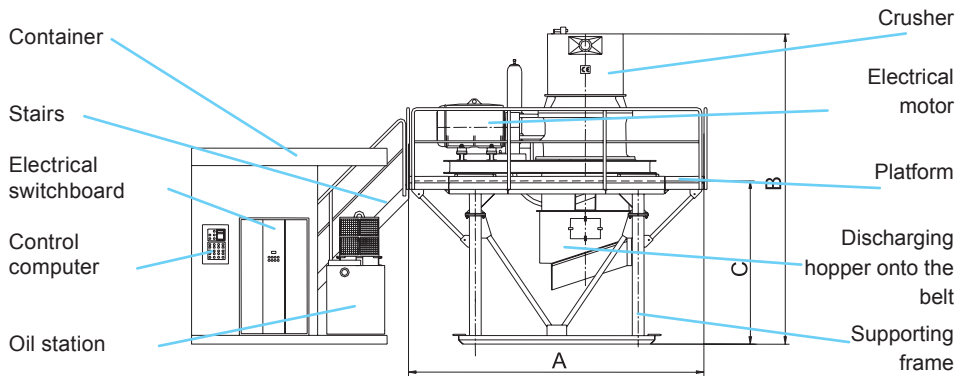
Type	Setting mm	Max. inlet piece* mm	Capacity t/h	El motor kW
KDC 22 HP	19 - 35	188	80 - 180	75 - 90
KDC 23 VP	25 - 50	270	135 - 300	110 - 132
KDC 23 HP	20 - 42	220	120 - 265	
KDC 25 EP	30-65	430	240 - 590	200
KDC 25 VP	30 - 63	330	240 - 560	160 - 200
KDC 25 HP	24 - 52	260	190 - 460	
KDC 26 VP	35 - 65	430	340 - 800	250 - 315
KDC 26 HP	25 - 55	345	250 - 680	
KDC 26 SH	25 - 55	280	230 - 650	

Principle parameters of tertiary crushers KDC

Type	Setting mm	Max. inlet piece* mm	Capacity t/h	El. motor kW
KDC 32 SP	10 - 25	101	45 - 120	75 - 90
KDC 32 JP	6 - 22	73	35 - 105	
KDC 32 FP	4 - 16	43	30 - 80	
KDC 33 SP	14 - 32	150	80 - 205	110 - 132
KDC 33 JP	10 - 25	115	65 - 170	
KDC 33 GP	8 - 22	80	50 - 150	
KDC 33 FP	6 - 18	45	45 - 135	160 - 200
KDC 35 SP	18 - 42	190	160 - 420	
KDC 35 JP	12 - 32	115	130 - 340	
KDC 35 GP	10 - 28	80	110 - 320	250 - 315
KDC 35 FP	8 - 20	50	100 - 250	
KDC 36 SP	20 - 45	220	220 - 600	
KDC 36 JP	14 - 35	125	180 - 500	
KDC 36 GP	12 - 30	90	160 - 420	250 - 315
KDC 36 FP	10 - 25	60	150 - 380	

* Max. inlet piece is 80 – 100% of the inlet opening defined with the square mesh. Stated capacities and minimum settings are only informative and depend on properties and composition of the crushed material and way of feeding.

Cone crushers KDC, lowering of operating costs continues



Semi-mobile steel structure on skids.

Principle dimensions of secondary crushers KDC

Type	A mm	B mm	C mm
KDC 22xx	3300 x 2970	4071	1960
KDC 23xx	4520 x 3170	5014	2530
KDC 25 EP	4555 x 3820	6215	2985
KDC 25xx	4555 x 3820	5980	2985
KDC 26xx	5280 x 4590	7355	3760

Principle dimensions of tertiary crushers KDC

Type	A mm	B mm	C mm
KDC 32xx	3300 x 2970	3955	1960
KDC 33xx	4520 x 3170	4744	2530
KDC 35xx	4555 x 3820	5704	2985
KDC 36xx	5280 x 4590	6840	3760

CRUSHING



Cone crusher KDC 35 GP – andesite crushing



Cone crusher KDC 33 JP – spilite crushing



Cone crushers KDC 35 FP and KDC 23 HP – greywacke crushing



Tertiary crushing with KDC 32 JP



Cone crusher KDC 33 FP – granite crushing



Cone crusher KDC 32 SP – mined gravel crushing



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PSP Engineering a.s. is a leading supplier of specialized products and entire processing plants for the building material and mineral processing industries. PSP Engineering has been involved in the design and construction of cement plants, lime works, quarry and crushing plants, as well as gravel and sand pits for more than 50 years.

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