

# Vertical Compound Crusher

## 立式复合破碎机

### 用途及适用范围

立式复合破碎机是中硬以下物料的优选细碎设备，该机用于破碎抗压强度不大于210MPa，含水量不大于5%的各种岩石、矿石，如：石灰石、白云石、水泥熟料、铁矿石、钼矿石、铝矿石、鹅卵石、磷矿石、铜矿石、烧结镁砂、蛇纹石、生石灰、石膏、块煤、沸石、砂岩等物料。可广泛用于矿业、冶金、建材、耐材、水泥、煤炭、玻璃、化工、电力等行业。

### 工作原理

工作时，固定在主轴上的转子在电机驱动下按一定方向高速旋转运行，块状物料由进料斗落到甩料盘上，经高速旋转的甩料盘筋的冲击后，在离心力的作用下，被迅速抛向反击板而产生撞击。物料经反击板上的斜面及重力作用下，沿斜下方被反弹到锥形转子破碎腔，物料受到高速旋转的上锤头冲击，使物料获得足够的动能后被抛向反击板，并重复上述破碎过程，物料群在破碎腔内互相撞击得到再一次破碎，并在锥形空间做螺旋线下降，进入圆柱形转子腔内，对已破碎的颗粒进一步细破碎、挤压、研磨，再次重复上述破碎过程。如此，物料依次通过上、中、下转子破碎腔，高频次地被上、中、下锤头和反击板打击、反击、挤压、研磨，使物料由大到小逐渐被破碎，最终被破碎成所要求的颗粒，排出机体。



### 性能特点

立式复合破碎机是中硬以下物料的优选细碎设备，该机用于破碎抗压强度不大于210MPa，含水量不大于5%的各种岩石、矿石，如：石灰石、白云石、水泥熟料、铁矿石、钼矿石、铝矿石、鹅卵石、磷矿石、铜矿石、烧结镁砂、蛇纹石、生石灰、石膏、块煤、沸石、砂岩等物料。可广泛用于矿业、冶金、建材、耐材、水泥、煤炭、玻璃、化工、电力等行业。

### PFL-B系列主要技术参数 / PFL-B Main Specifications

项目 型号 Item Model	筒体内径 Inside Diameter of Roller (mm)	进料粒度 Feeding Size (mm)	出料粒度 Output Size (mm)	生产能力 Capacity (t/h)	电机功率 Motor Power(kw)	重量 Weight (t)	外形尺寸 Overall Dimension (mm)
PFL-750B	750	< 100	< 5, 90%	8-20	45	4	2370 × 1100 × 1300
PFL-1000B	1000	< 120	< 5, 90%	15-30	55	5.5	2680 × 1500 × 1400
PFL-1250B	1250	< 150	< 5, 90%	30-45	90	8.2	2970 × 1900 × 1900
PFL-1500B	1500	< 180	< 5, 90%	50-70	132	13.7	3400 × 2200 × 2100
PFL-1750B	1750	< 200	< 5, 90%	70-100	160	17.5	3800 × 2360 × 2200
PFL-2000B	2000	< 220	< 5, 90%	100-120	185	23	4590 × 2680 × 2300

注：技术数据如有变动，恕不另行通知。

Note: Any Change of technical data shall not be advised additionally.



#### Usage and Application

The vertical compound crusher is fine crushing equipment that crushes materials in middle hardness, such as rocks and mines with pressure strength less than 210MPa and humidity less than 5%. E.g. limestone, dolomite, cement clinker, iron ore, molybdenum ore, aluminum, cobble, rock phosphorite, copper ore, burned magnesite, serpentine, calces, gypsum, lump coal, zeolite, sandstone and so on. It is widely used in the industry of mining, metallurgy, building materials, fireproof materials, cement, coal, glass, chemical industry, electricity power and so on.

#### Working Principle

The motor drives the rotor that fixed on the main bearing to run quickly toward certain direction when the machine works. The materials are fallen into the throw-up disc and impacted by the high speed strips of the throw-up disc, and then strikes with the impact board under the effect of Centrifugal Force. Because the impact board is bevel and the gravitation, the materials are threw to the taper crushing room and impacted by the high-rotating up hammerhead. After gaining sufficient energy, the materials are thrown to the impact board again and action repeats. The materials strike with each other in the crushing room and then are down to the column-shape rotor room. Then crushed, pressed, and ground and action repeats. In this way, the materials go through up, middle, and down rotor crushing rooms and crushed, pressed, and ground by the hammers and the impact boards, and finally the materials are gradually crushed into needed sizes and come out.

#### Feature

The machine has special structure in the part of throw-up disc, which can improve the usage of abrasive material and reduce the cost. The wearing parts are made of anti-abrasion material (metal alloy in high hardness and toughness), so it can endure for long time. It has the advantage of high crushing ratio, large output, high efficiency, and low consumption. It is of easy operation, good performance, low noise, little vibration and good airproofing, so it is a high efficient and high level fine crushing equipment.

#### PFL系列主要技术参数 / PFL Main Specifications

项目 Item 型号 Model	筒体内径 Inside Diameter of Roller (mm)	主轴转速 Main Shaft Speed(r/min)	进料粒度 Feeding Size (mm)	出料粒度 Output Size (mm)	生产能力 Capacity (t/h)	电机功率 Motor Power(kw)	重量 Weight (t)	外形尺寸 Overall Dimension (mm)
PFL-800	800	1100	< 50	< 5, 90%	5-15	22	2.1	2000 × 900 × 1650
PFL-1000	1000	980	< 80	< 5, 90%	10-25	45	3.2	2700 × 1150 × 1800
PFL-1250	1250	780	< 120	< 5, 90%	20-40	75	4.2	2900 × 1350 × 1850

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