Smart, simple, space-saving design

Key benefits
- High efficiency separation
- Highly effective nibs extraction minimises clogging of mill grates, thus enabling long-lasting full mill capacity
- Low operating costs

Low initial costs
- Self-supporting structure
- Standard range drive parts
- One feed point in low position

Flexible and versatile
- Adaptable to:
  - All cement grinding ball mill systems
  - Fully or semi air-swept raw grinding ball mills
  - Flash driers

Low maintenance costs
- Optimum wear protection
- Automatic grease lubrication system
- Easy access for maintenance

The high efficiency separator improves the mill performance by avoiding over grinding of the material, and gives the required product fineness by efficiently separating the course particles from the fine particles. Decades of know-how in high-efficiency separation enables FLSmidth to supply the most suitable separator for almost any application.

Low initial costs
The simple and space-saving design of the SEPAX makes it an economical investment. The separator is fitted within a self-supporting shell structure, and the entire separator unit with cyclones is supported by one ring-shaped support only. Reducer and motor are placed in line with the bearing housing, forming a compact and rigid drive-line unit. Finally, the SEPAX has one feed point placed at a low level, minimising the height of the separator feed elevator and simplifying the layout.
SEPAX separator

1. Air outlet
2. Flexible coupling
3. Motor
4. Reducer
5. Rotor
6. Reject collecting guide vanes
7. Planetary separator supported cyclone
8. Ring-shaped support
9. Fine material outlet
10. Reject outlet cone valve
11. Feed point
12. Pneumatic unloading valve
13. Nibs disposal container
Maximum efficiency

The SEPAX is very efficient in operation and cuts specific energy consumption to a minimum, while maintaining maximum output. A highly effective system for removal of worn grinding media from the mill discharge material means less clogging of diaphragms. This optimises mill performance and enables long-term, continuous operation.

Flexible and versatile
The SEPAX is designed to be equipped with drives ranging from low power drives for raw grinding to powerful drives for the finest grinding while still utilising the full design air flow. This ensures maximum efficiency regardless of the end product quality specified.

The SEPAX can be equipped with separator-supported cyclones or stand-alone cyclones for the collection of fines.

The feed concept is based on the material being suspended in the vertical air flow through the riser duct. This makes the SEPAX highly adaptable to various raw grinding applications. Consequently, the separator can be integrated into the mill venting system, in the case of fully or semi air-swept mills, or installed on top of a flash dryer that forms the riser duct leading up to the SEPAX.

Low maintenance costs
The SEPAX is designed to be easily serviceable. Worn and broken grinding media are not recycled, which helps to save maintenance work on the mill grate plates. The removal of nibs from the separator feed reduces the wear on critical separator parts. Easily accessible and serviceable wear protection is fitted where appropriate, and the bearing unit can easily be replaced.
Wear protection

- **Densit Wearcast 2000**
The material is a 30 mm thick cement bound composition containing 55% hard (9 Mohs) grains of corundum (Al2O3). Densit Wearcast is easy to install and repair. It has been tested to outlast basalt by a factor of 1.3 when exposed to sandblasting at various inclinations.

- **Hardox 400**
This is a world-known, abrasion-resistant, weldable steel plate, which is throughhardened to more than 360 HB and is recognised for its superior abrasion resistance properties.

- **Chromium compound wear plate**
This material is a mild steel plate with a thickness of 4 to 8 mm, onto which a 4 - 5 mm layer of hardfacing is welded. The hardfacing consists of primary chromium carbides in a eutectic matrix with eutectic chromium carbides. The hardness of the matrix reaches 600-750 HV, the grains 1400 HV. The temperature limit is 400 deg C.

- **High carbon steel**
This is a low cost and highly versatile material which is used in places where moderate wear occurs.

- **Mild steel**
# Dimensions and characteristics

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