About S&F GmbH

The family-owned company established in 1990 supplies screening machines and conveying systems around the world to meet the specific requirements of different industries and customers. The company takes pride in its excellent, personal service and in the expertise of its employees. All machines are extensively tested and optimised at S&F for the various tasks. The result: bespoke, long-lasting and service-friendly solutions.

- **Screening machines and systems**
- **Separating and screening plants**
- **Dosing and conveying plants**
- **Project planning**
- **Assembly and spare part service**

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Vibrating feeders

AFR Series

GmbH
Siebmaschinen & Fördertechnik
Screening machines and materials handling technology

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Vibrating feeders
AFR Series

The type AFR vibrating feeders from S&F are suitable for gentle conveying and transport of free-flowing bulk material with almost any grain size. The compact drive system, the high-quality vibrating elements and the resilient, tough construction provide outstanding quiet running and a long, low-maintenance service life. Vibrating feeders in the „AFR“ model series provide conveyor widths from 400 to 2,000 mm, construction size-dependent conveyor lengths of up to 7 m and material-dependent capacities of up to 400 m³/h.

Function description:

S&F vibrating feeders with an unbalance drive are used to transfer free-flowing bulk materials from upstream machines and systems. The material is gently transported at a constant speed by means of the vibration of the unbalance motors.

Two unbalance motors running synchronously in opposite directions generate a sinusoidal tossing motion, and provide gentle product transportation

The two unbalance motors, which are attached to the side or the underside of the machine and are operated synchronously in opposing directions, generate a directed, linear vibrating movement of the vibrating feeder. The sinusoidal tossing movement guarantees synchronous running of the machine and uniform transportation of the bulk material. The vibrating feeder is supported by high-grade, rubber-cushioned vibrating components with a high degree of lateral stability. The elastic bearing prevents the vibration from being transferred to the subsurface. The vibratory movement ensures that the material which is fed in is constantly in motion, and flows via the conveyor trough in the direction of the discharge. The material is then transferred to the downstream machine.

Capacity adjustment by changing the unbalance masses when at a standstill

Changing the unbalance masses when the machine is at a standstill makes it possible to adjust the pre-set amplitude (vibration frequency) to the material properties of the conveyed material. Special types of vibrating feeder are the screening conveyor and the vibrating tubular feeder. Screening conveyors with a screen deck are suitable for simple sorting tasks such as protective screening. Vibrating tubular feeders are used to transport dusty and powdery bulk materials.

Application areas:

S&F vibrating feeders are used in the wood industry (sawmill industry, pelleting industry, pulp industry), the recycling industry and waste management (wood waste processing, refuse derived fuel power stations), the chemical industry (fertilizer industry, plastic industry), the glass industry, the ceramic industry, in foundries and in the building material industry (stone and earth industry, cement industry, concrete industry).

Materials to be conveyed:

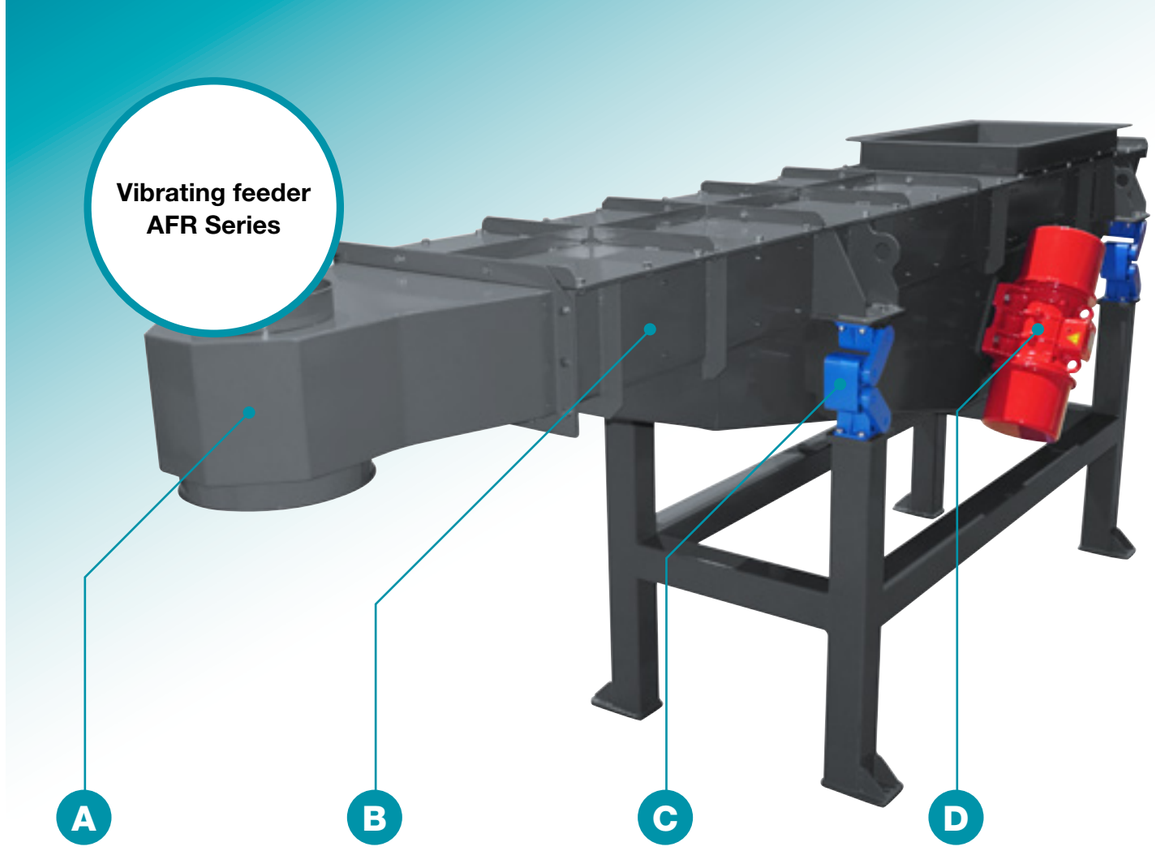
Vibrating feeders convey and transport wood chips, sawdust, pulverized waste wood, bio-mass, bark, bark mulch, pellets, granulate, quartz sand, refuse derived fuel, ash, broken glass, cable scrap and much more.

Advantages of S&F vibrating feeders:

- **High performance and gentle product conveying** by means of directed vibration movements and parameters which are adapted to the material properties.
- **Solid and robust construction** with long-lasting drive unit and maintenance-free, rubber-mounted vibrating elements.
- **Operationally safe and reliable** even under extreme conditions such as heat and dust.
- **Good product flow control** since the amplitude and the oscillation frequency can be influenced by changing the unbalance masses when at a standstill.
- **Low maintenance and easy to repair** due to low number of wear parts, use of maintenance-free and durable vibration components and other high-quality components.
- **Low noise pollution** due to an energy-efficient and low-noise drive system and attenuated, rubber-cushioned components which dissipate interfering structure-borne noise and provide quiet machine operation.
- **Favourable price-performance ratio** due to simple mechanical structure and long service life of the installed components.
- **Low dynamic loads** due to use of high-quality, maintenance-free and rubber-cushioned vibrating components with a high degree of insulation.
- **Low wear** since there is no direct contact between the conveyed material and the mechanical machinery components.
- **Flexibly deployable** for different tasks and materials.
- **Longer conveying distances possible** by connecting several vibrating feeders in series.
- **Can be integrated in existing plant systems** thanks to its compact design and customised solutions.

Accessories and options:

- Sub-structure
- Version as “Screening conveyor”
- Version as “Vibrating tubular feeder”
- Cover hood (vibrating feeder with sealed, dust-tight design)
- Dedusting nozzles
- Wear-resistant lining (wear protection)
- Material discharge
- Frequency converter for smooth capacity control
- Round ports (JACOB piping system)
- Flexible inlet and outlet collars (compensators)
- Special materials
- Special paint



Exceptional economic efficiency.
The low proportion of maintenance and wear parts and the robust construction ensure that the equipment will have a long and low-maintenance service life.

Operationally safe and reliable.
The robust and simple design makes the vibrating feeder flexibly deployable for different bulk materials, even under extremely conditions such as heat and dust.

Low-maintenance, durable vibrating components.
The attenuated, low-maintenance vibrating components with a high insulating effect dissipate interfering structure-borne noise and provide low-noise operation.

Extremely powerful.
The generously sized unbalance motors which perform directed vibration convey up to 400 m³/h with low spatial requirements depending on the feed material.

Technical Data:

Machine model	AFR-400	AFR-500	AFR-650	AFR-800	AFR-1000	AFR-1200	AFR-1500	AFR-2000
Conveyor width [mm]	400	500	650	800	1,000	1,200	1,500	2,000
Conveyor length [mm]	1,000 – 7,000	1,000 – 7,000	1,000 – 7,000	1,500 – 7,000	1,500 – 7,000	1,500 – 7,000	2,000 – 6,500	2,000 – 6,000
Trough height [mm]	200	200	250	250	300	300	350	400
Trough plate thickness [mm]	4 / 5 / 6 / 8 **							
Conveying capacity (material-dependent) [m³/h] *	5 – 30	10 – 40	15 – 60	20 – 90	30 – 120	40 – 150	70 – 250	100 – 400
Conveying speed [m/min]	up to 15 **							
Machine incline [°]	0 – 10 **							
Drive output [kW]	2 x 0.35 – 2 x 5.0 **							
Unbalance motor speed [rpm]	750 | 1,000 | 1,500 (50 Hz) ** 900 | 1,200 | 1,800 (60 Hz) **							

* The performance data depends on the material properties of the conveyed material (bulk weight, grain size, material moisture), the conveying speed, layer height, machine incline, drive power, unbalance setting etc.
** dependent on size

Subject to technical amendments. | All approximate specifications. | Excerpt from our model list. Additional models upon request. | Version: 06/2018

Conveyor systems