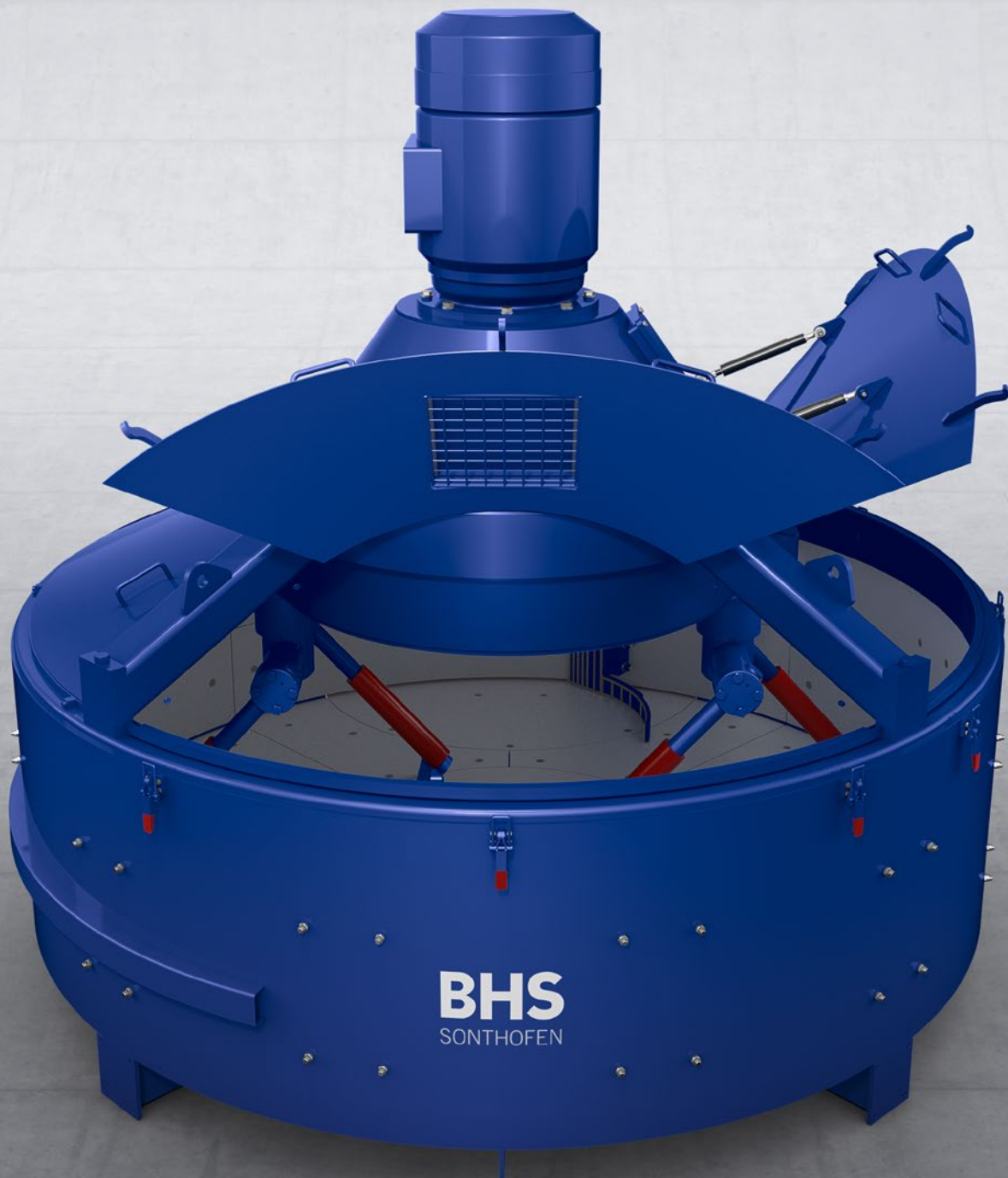


## **PLANETARY MIXER (BPX)**

Intensive Mixing of Highly Complex  
Building Materials

TRANSFORMING  
MATERIALS INTO VALUE



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# TRANSFORMING MATERIALS INTO VALUE

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Mixing and crushing technology at its best.

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BHS-Sonthofen is an owner-operated group of companies in the field of machinery and plant engineering based in Sonthofen, Germany. The company offers technical solutions and consulting services in the field of mechanical and thermal process technology, specializing in filtration, drying, mixing, shredding, and recycling. BHS-Sonthofen has a global presence, with more than 600 employees and several subsidiaries.

## **Over 130 years of experience in mixing technology**

BHS-Sonthofen developed and manufactured the first twin-shaft batch mixer back in 1888. The product range of high-quality mixing technology has been consistently continued and developed since then. Eurostar Concrete Technology in Italy was acquired in 2022. BHS-Sonthofen now has the most extensive expertise and portfolio for almost every building material application.



**Mixing tests at the BHS test center**

BHS offers customers the opportunity to conduct mixing tests with their own specific materials at the BHS test center in Sonthofen, Germany. In addition, a production machine can be operated directly on the customer location in order to develop solutions to challenging problems.

**Valued partner**

We are a valued partner with many mixing plant manufacturers around the world.

**Worldwide service**

BHS offers quick and reliable service worldwide with its technical customer support and spare parts stock on three continents for all machine types, including older mixers.



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# PLANETARY MIXER

Mixing technology at its best

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The mixing technology is suitable for all fine-grained formulas and offers a wide range of benefits. The mixing procedure has a significant effect on the quality of the mixture produced and the economic efficiency of the production process.



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## Mixing Result

Thanks to a proven design and arrangement of the mixing tools, you will achieve consistent, homogeneous mixtures batch after batch with short mixing cycles.



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## Ease of Maintenance

Our machines are characterized by a sturdy, durable design and easy access for maintenance work.



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## Modular System

We offer a wide variety of mixer sizes and accessories. Our planetary mixer can be adapted precisely to your needs thanks to an extensive modular system.



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## FUNCTION AND MIXING CONCEPT

The mixing concept of the planetary mixer in detail

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The mixing system works with mixing tools driven from above, which move on a circular path and also around themselves. This ensures uniform, complete mixing of the material in the mixing trough without dead spots.



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# MIXER CONFIGURATION

Ideally matched to customer requirements.

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In addition to our standard configuration, we offer numerous options for customizing your planetary mixer to the specific task.

## Drive power

The planetary mixer can be designed with different drive versions based on the maximum torque required.

## Speed

Frequency converters allow the BPX to be operated at the optimum speed for the mixture in order to adapt the Froude number to the specific mixing task.

## Feeding sequence

The location of the inlets and the feeding sequence influence the mixing result and mixing time. We have the know-how for optimum feeding.

## Discharge

Depending on the application and plant requirements, the mixers can be designed with several discharge gates.

## Our broad BPX product range

With our comprehensive range of planetary mixers, we offer the right solution for any requirement, thus making our products a safe investment at all times.

In addition, depending on the application, there is a wide range of configuration options for the mixing units, drives, discharge variants etc.

Our planetary mixers are available in sizes from 0.25 to 4.00 m<sup>3</sup> and can be equipped with a range of additional options depending on your requirements.

Benefit from our experienced and competent experts when selecting the mixer for your application.

Application	BPX
Pumped concrete	☑
Face and core concrete	☑
Ready-mixed concrete, input size up to 32 mm	☑
Lightweight concrete	☑
Wet mortar	☑
Screed	☑
Precast concrete	☑
Self-compacting concrete	☑
Special concrete grades	☑
UHPC	☑
Concrete for concrete products	☑
Glass batch	☑
Dry material	☑

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# SOPHISTICATED AND PROVEN DRIVE TECHNOLOGY

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High level of operational reliability, energy efficiency, and durability.

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## 1 Gearbox

The robust planetary gearboxes are developed and manufactured in-house and offer energy efficiency, operational reliability, and durability. The precision gear set runs in a generously dimensioned oil bath for optimum lubrication. This also optimizes heat dissipation, making additional temperature monitoring unnecessary.

## 2 Electric motor

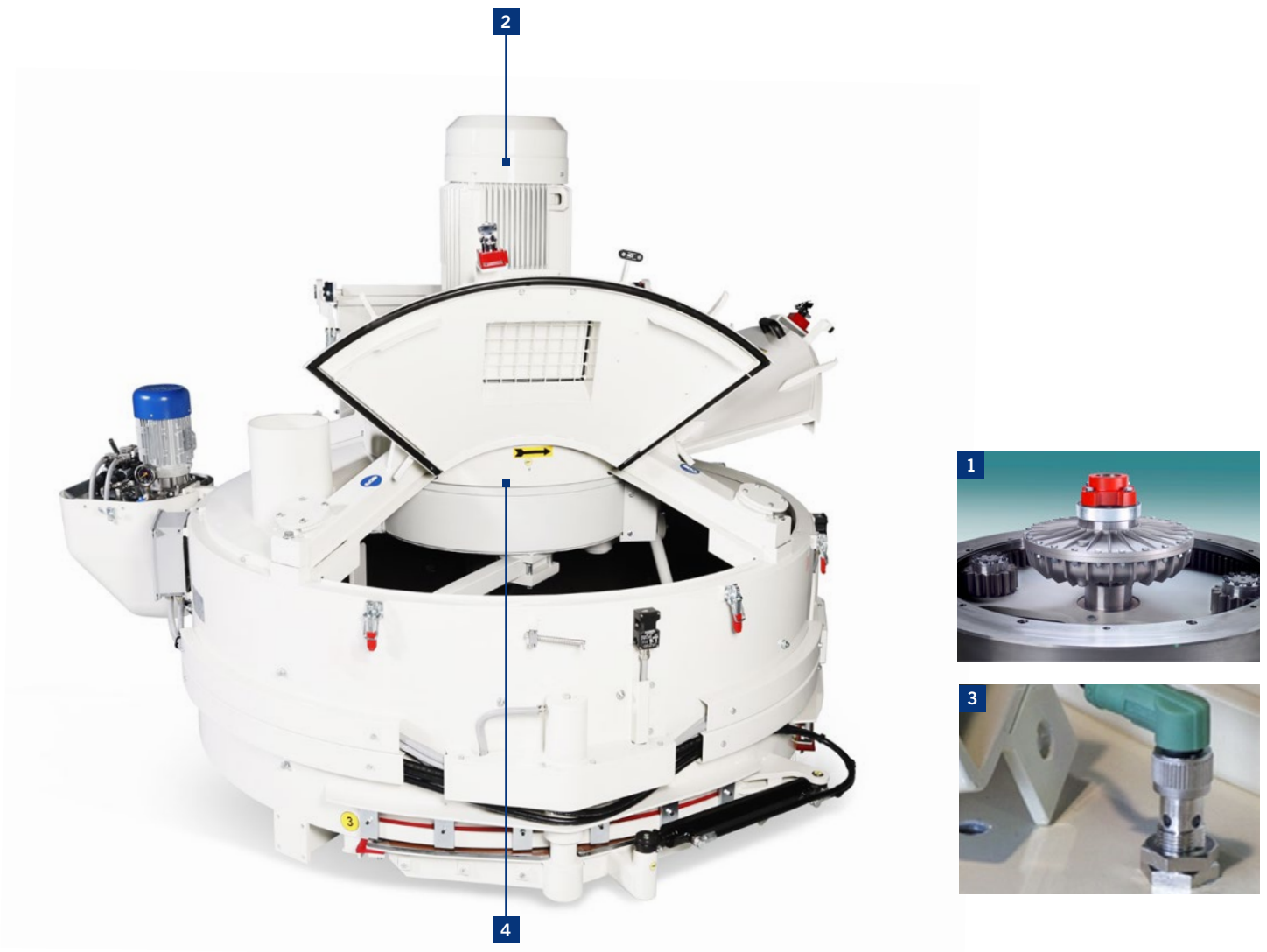
We only use high-quality mixer motors for our planetary mixers including temperature probe. They are specifically designed for the load cycles generated.

## 3 Speed monitor

A speed monitor is installed as an additional safety measure.

## 4 Hydrodynamic coupling

The hydrodynamic coupling protects against mechanical and electrical load peaks and enables smooth start-ups under full load.



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# VARIABLE MIXER CONFIGURATION

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For optimum adaptation to the task.

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## 1 Mixer blades

The mixers can be configured with reversible blades made of chrome chilled cast iron, polyurethane, or carbide, depending on the application.

## 2 Mixing trough lining

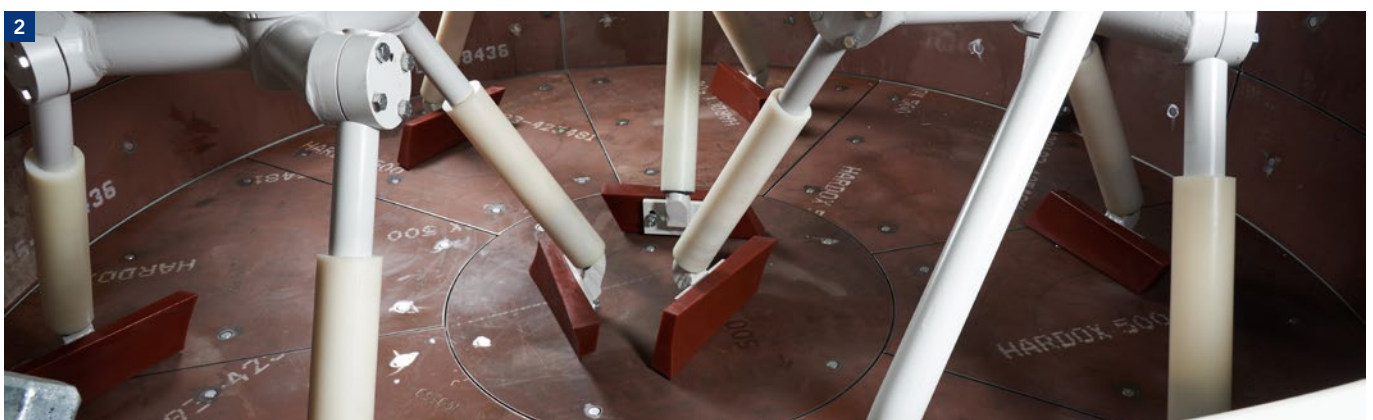
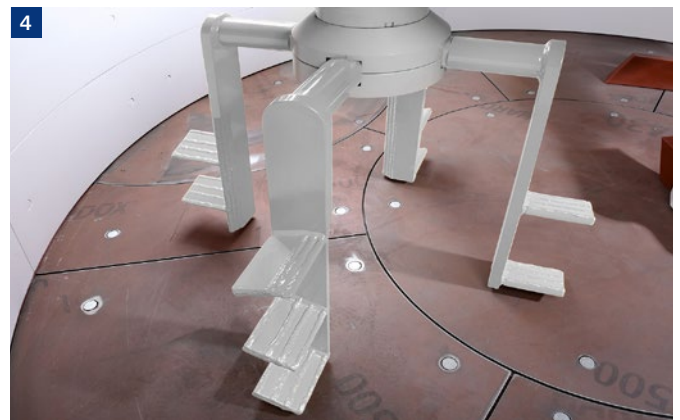
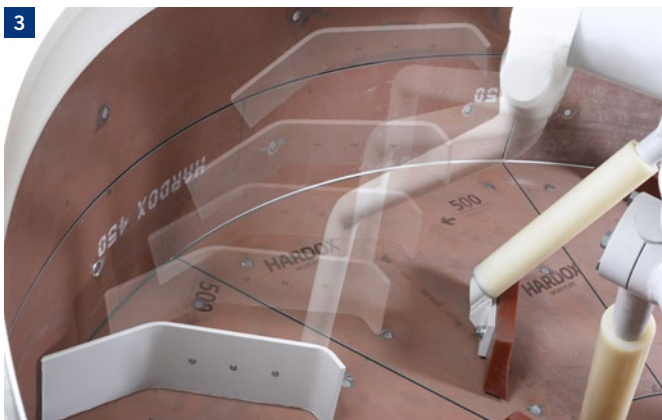
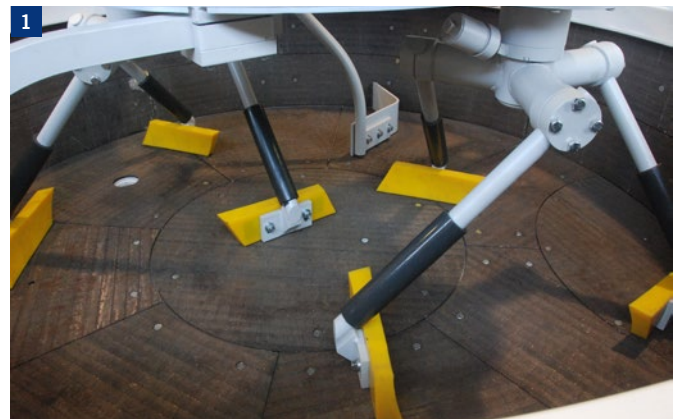
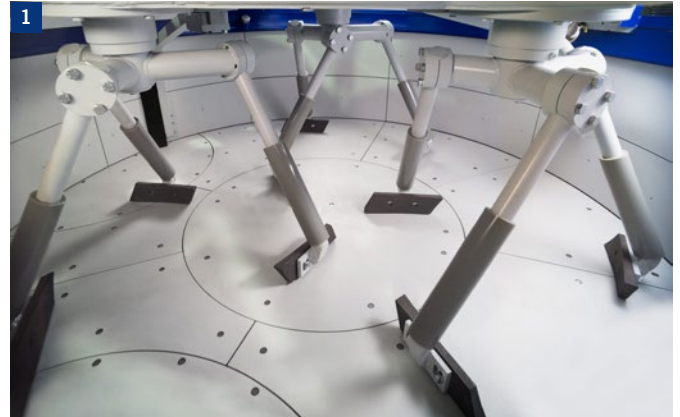
Precision-manufactured elements in abrasion-resistant materials are available for lining the mixing trough.

## 3 Fast discharge device

The fast discharge device is a movable scraper blade that is lowered for fast, low-residue emptying of the mixing trough. This reduces discharge times and also minimizes wear and power consumption.

## 4 Agitators

An agitator can be used to avoid agglomeration in complex mixing tasks. The shape of the agitator is determined according to the application.





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# OPTIONAL EXTRAS

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Customization down to the smallest detail.

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## 1 Moisture and temperature measurement

Our planetary mixers can be equipped with measuring probes from all major manufacturers for measuring the moisture or temperature of the mixture. Due to its design and the intensive movement of the mixture, the planetary mixer delivers particularly reliable measuring results.

## 2 Sampling

Our planetary mixers can be fitted with a manual or hydraulic device for taking mixture samples at the through wall. This option represents a decisive advantage, especially when it comes to producing demanding concrete formulations.

## 3 Electrical terminal box

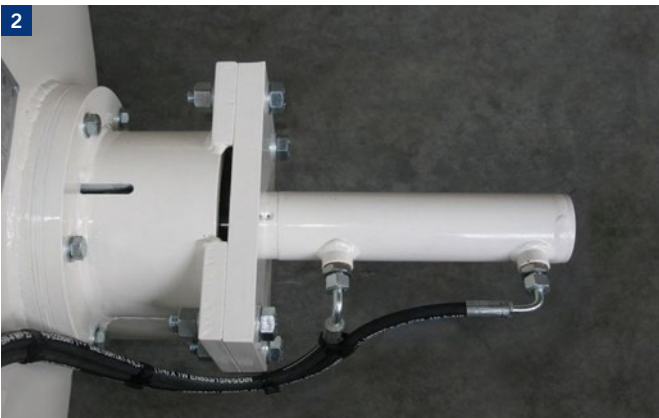
All the cabling can optionally be connected to a terminal box for easier installation. This reduces installation costs on the construction site.

## 4 Automatic lubrication system for the mixing stars

The rotary union on the mixing stars is lubricated automatically by means of spring-loaded lubrication cartridges, which are well-protected in a robust housing.

## 5 Non-stick lining

A replaceable PE lining is recommended in order to significantly reduce build-up on the underside of the drive.



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# MACHINE AND PLANT ACCESSORIES

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Perfectly adapted to every challenge.

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## 1 Mixing trough cover

The dust-proofed mixing trough cover of our planetary mixer is equipped with large maintenance hatches that are opened with the aid of gas springs. A wide range of optional custom connections for feeding, venting, video monitoring or color and fiber addition are available upon request. Dust can be successfully removed via airbags or an active filter.

## 2 Water dosing

Depending on the requirements, water can be added through baffle plates or water spray pipe systems (with or without pressure). The water nozzles of the pressurized water spray pipe system are designed for pure and recycled water. We offer reliable steam injection systems for the production of hot concrete.

## 3 High-pressure cleaning

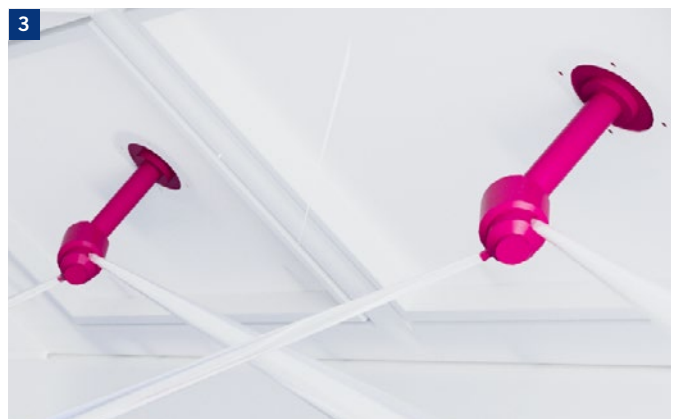
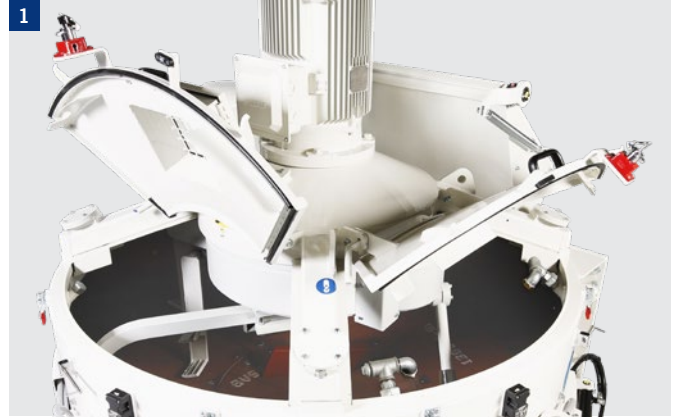
Our proven high-pressure cleaning system with three-dimensional rotating nozzle heads delivers excellent cleaning results and uses water very sparingly. The high-pressure cleaning system can be extended by an additional ring piping system for cleaning the discharge hopper. In dual mixer plants, only one high-pressure aggregate is required for cleaning both mixers alternately.

## 4 Skip hoist and weighing system

We offer customized solutions for fast and clean feeding of the mixer with aggregates and for precise dosing of the various mixing components.

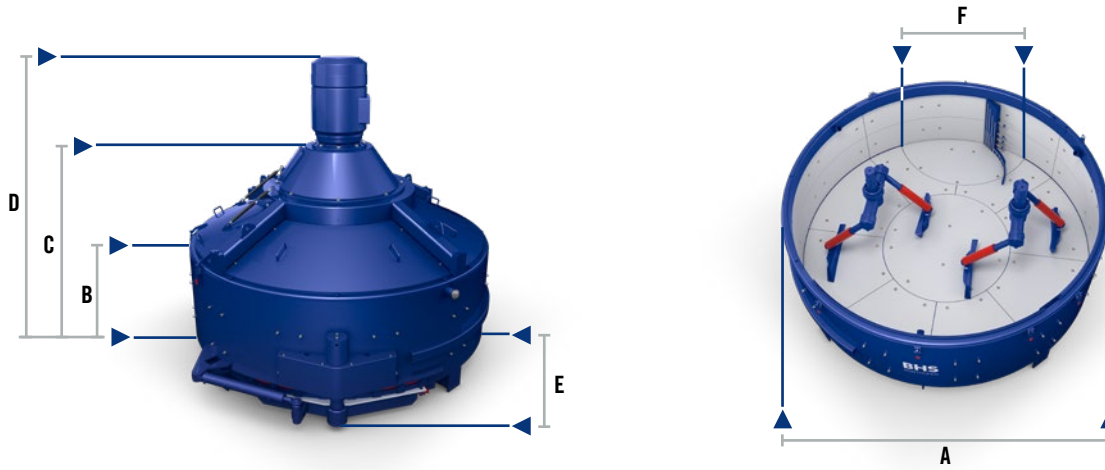
## 5 Discharge hopper

We supply proven standard and customized solutions for mixture discharge. Various linings and additional functions (drip protection, swivel extensions, etc.) are also available.



# TECHNICAL SPECIFICATIONS

Comprehensive product portfolio.



Type	Dry charge	Compacted concrete output per batch	Mixing stars and blades	Motor power		Skip hoist	
				Mixer	Hydraulic unit	Loading capacity	Motor power
BPX 0.25	0.38 m <sup>3</sup>	0.25 m <sup>3</sup>	1x2	11 kW	2.2 kW	0.56 m <sup>3</sup>	5.5 kW
BPX 0.33	0.5 m <sup>3</sup>	0.33 m <sup>3</sup>	1x2	15 kW	2.2 kW	0.66 m <sup>3</sup>	5.5 kW
BPX 0.5	0.75 m <sup>3</sup>	0.5 m <sup>3</sup>	1x2	22 kW	2.2 kW	0.83 m <sup>3</sup>	7.5 kW
BPX 0.75	1.13 m <sup>3</sup>	0.75 m <sup>3</sup>	1x3	37 kW	3 kW	1.33 m <sup>3</sup>	11 kW
BPX 1.0	1.5 m <sup>3</sup>	1 m <sup>3</sup>	2x2	45 kW	3 kW	1.99 m <sup>3</sup>	15 kW
BPX 1.5	2.25 m <sup>3</sup>	1.5 m <sup>3</sup>	2x3	75 kW	3 kW	2.5 m <sup>3</sup>	18.5 kW
BPX 2.0	3 m <sup>3</sup>	2 m <sup>3</sup>	3x3	90 kW	4 kW	3.4 m <sup>3</sup>	22 kW
BPX 2.5	3.75 m <sup>3</sup>	2.5 m <sup>3</sup>	3x3	110 kW	4 kW	4.32 m <sup>3</sup>	30 kW
BPX 3.0	4.5 m <sup>3</sup>	3 m <sup>3</sup>	3x3	132 kW	7.5 kW	6.2 m <sup>3</sup>	45 kW
BPX 4.0	6 m <sup>3</sup>	4 m <sup>3</sup>	3x3	3 x 75 kW	11 kW	6.55 m <sup>3</sup>	45 kW


Quality concrete maximum aggregate size 32 mm. Performance data for other materials available on request.

All specifications apply to the standard design. Technical specifications of customized designs may differ from the data provided here.

All technical specifications are subject to change due to ongoing development. Subject to change without notice.

Type	A	B	C	D	E	F	G	Weight <sup>5)</sup>
BPX 0.25	1,300 mm	720 mm	1,330 mm	1,750 mm	700 mm	260 mm	840 mm	1,440 kg
BPX 0.33	1,600 mm	720 mm	1,380 mm	1,860 mm	850 mm	350 mm	940 mm	1,610 kg
BPX 0.5	1,900 mm	770 mm	1,175 mm	1,720 mm	1,000 mm	480 mm	1,080 mm	2,050 kg
BPX 0.75	2,300 mm	930 mm	1,652 mm	2,340 mm	1,220 mm	690 mm	1,390 mm	3,740 kg
BPX 1.0	2,500 mm	930 mm	1,690 mm	2,380 mm	1,320 mm	690 mm	1,390 mm	4,880 kg
BPX 1.5	2,800 mm	930 mm	1,760 mm	2,600 mm	1,470 mm	690 mm	1,390 mm	5,590 kg
BPX 2.0	3,300 mm	1,150 mm	2,020 mm	2,900 mm	1,720 mm	930 mm	1,690 mm	8,600 kg
BPX 2.5	3,300 mm	1,150 mm	2,090 mm	3,130 mm	1,720 mm	930 mm	1,690 mm	9,100 kg
BPX 3.0	3,600 mm	1,340 mm	2,315 mm	3,350 mm	1,890 mm	1,050 mm	1,860 mm	11,800 kg
BPX 4.0	4,000 mm	1,405 mm	2,780 mm	3,350 mm	2,192 mm	1,270 mm	2,120 mm	19,400 kg

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 Learn more

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