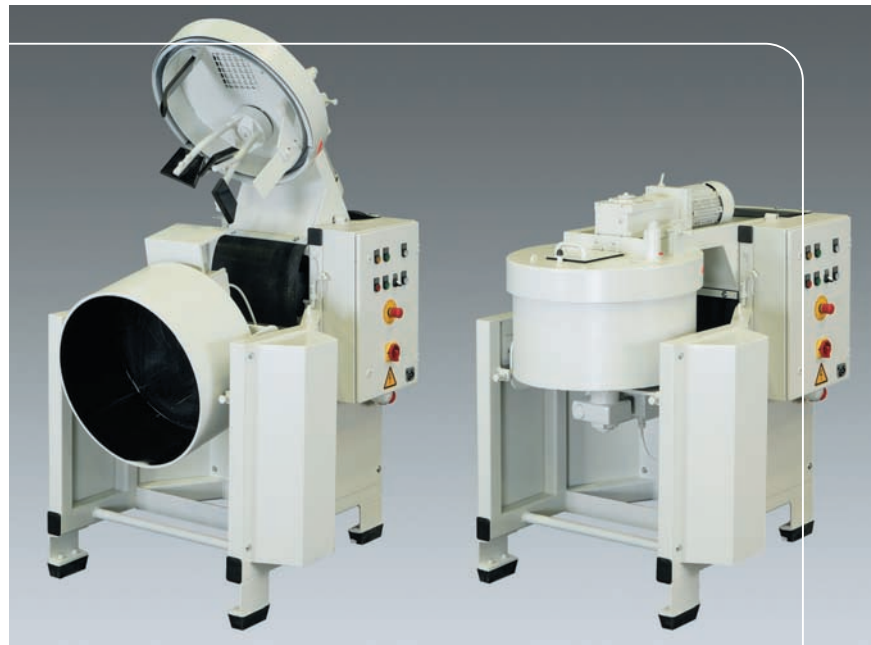


Zyklus Rotating Pan Mixer



Mixing



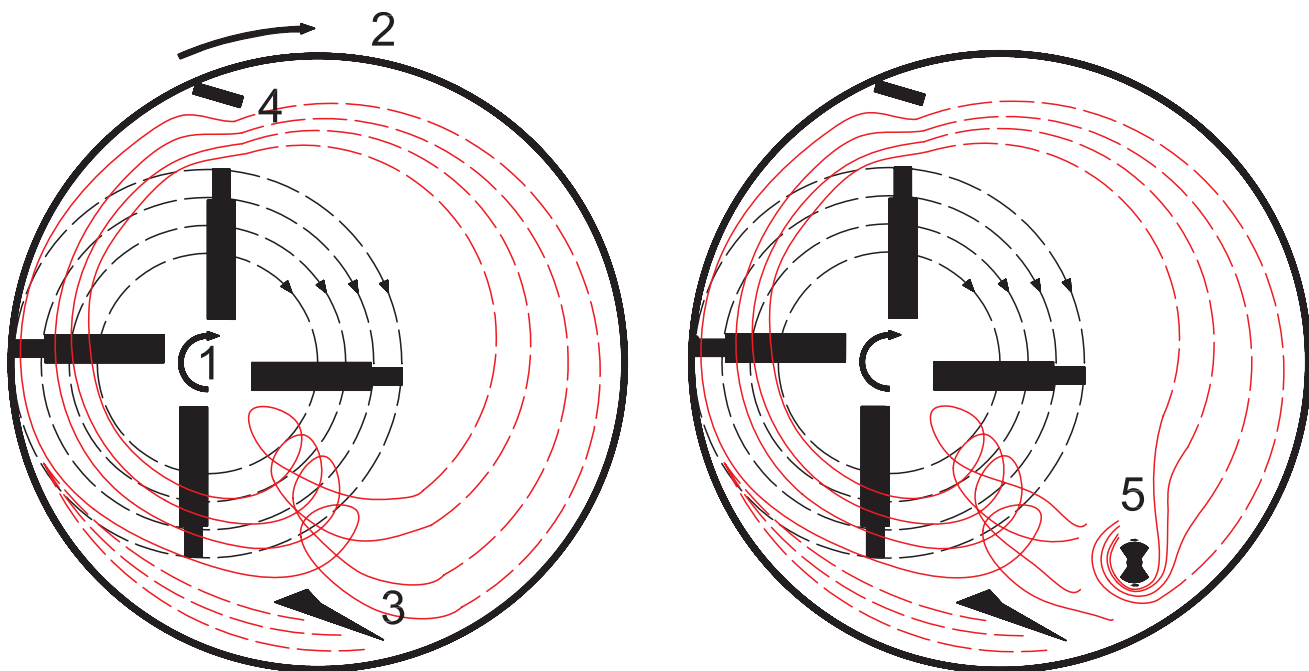
# Zyklus Rotating Pan Mixer



Mixing



## The Zyklus Mixing Principle



### Mixing processes

- Dry mixing
- Damp mixing
- Wet mixing
- Mixing liquid additives to solids
- Introducing steam or foam
- Homogenising
- Stirring
- Kneading
- Mixing with changing material consistencies
- Mixing batches with varying densities
- Mixing materials with different grain sizes
- Mixing materials with different ratio of components

### Mixing performance is based on the uniflow system.

The offset mixing star 1 rotates synchronously with the mixing pan 2 thus producing high levels of shearing effect and kinetic energy release. Due to the high relative velocity of the batch a homogeneous mixture is quickly achieved. Statically mounted mixing tools 3 4 on the tilting arm effect a horizontal and vertical rearrangement within the batch.

A wall scraper 4 continuously removes batch residues from the pan wall and deposits this back into the batch flow stream.

The pressure of the batch against the wall and the bottom of the mixing pan, produced by the mixing tools, makes the mixing pan turn co-currently without any extra drive. This rotation can be supported - if necessary - by an additional pan drive.

In order to intensify the mixing process, we could supply high speed whirlers (5) as an option.



## Areas of application and examples<sup>1)</sup>

### All sorts of concrete:

- Lightweight, fibre, fine, polymer concrete
- Self compacting and Ultra High Performance Concrete
- Mortar, plaster
- Concrete and artificial stones
- Exposed aggregate concrete
- Paving slabs
- Roof tiles
- Precast concrete parts such as coloured U-, L- and manhole stones, window and door lintels, prefabricated garages
- Internal/external concrete pipes
- Crane counterbalance weights
- Machine tool beds
- Spacer blocks for reinforced concrete

### Further applications:

- Ready mix: Adhesives for tiles
- Floorings: Industrial or sports ground flooring
- Refractory and ceramic compounds
- Furnace linings
- Commodity goods (flower pots)
- Expanded clay
- Porcelain
- Roof tiles
- Glass compounds
- Accumulator fillings
- Abrasives
- Foundry sand
- Insulating materials
- Cold bitumen and asphalt
- Fillers
- Chemical products
- Waste treatment
- Binding of dust with cement for disposal or recycling

1) Depending on material, special executions might be possible, for example explosion protection while mixing several polymers etc.

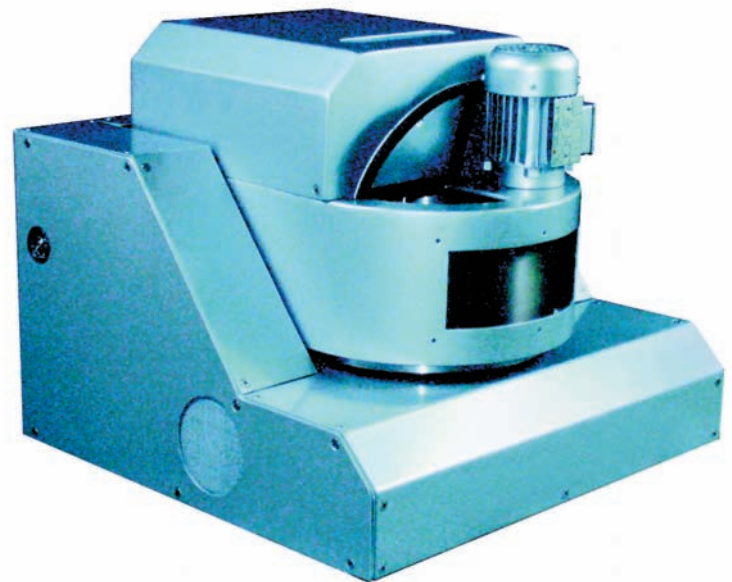
# ZZ 3 PE



Mixing



## Stationary mixer with detachable mixing pan



### Equipment

- Speed control using frequency converter
- Mixing time control
- Parts in contact with product made of stainless steel
- Illuminated (interior) mixing chamber
- Easily removable mixing star
- Viewing opening in mixer lid

### Special equipment

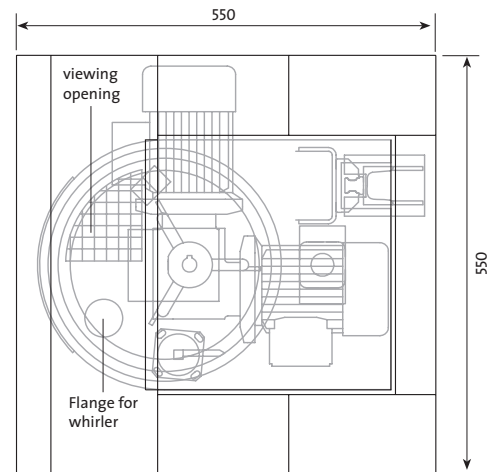
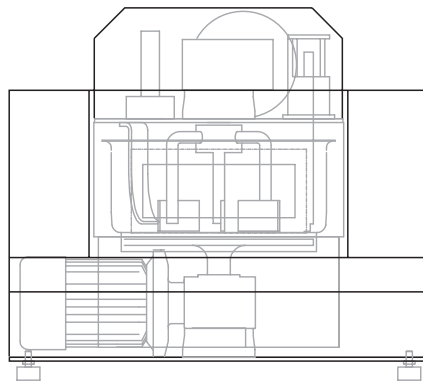
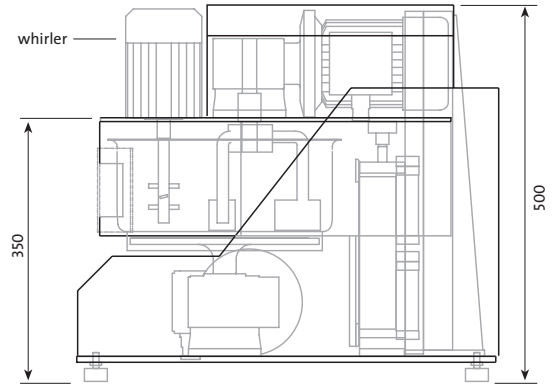
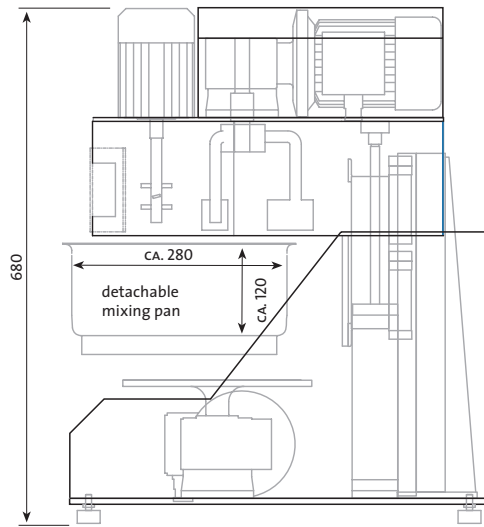
- High-speed whirler 0.06 kW  
900-1500 rpm frequency-controlled
- Whisper compressor 0.2 kW, 40 db(A)
- Water dosage
- Mixer table as customer's choice
- Electrical controls for special voltage/frequency

### Operational features

When the power is on but the tilting arm is in the raised position the mixing star cannot rotate.

When the mixing pan is in place, the lowering of the tilting arm actuates the mixing star, which is let down into the material to be mixed. Raising the tilting arm automatically stops the mixing star. The tilting arm is raised and lowered pneumatically. All functions can be selected using a membrane keypad. The separate control panel and the control cabinet can be located on the left or the right side of the machine.

The current machine parameters can be seen on the LCD display.



**ZZ 3 PE**

Batch capacity (ready-made mix)	l	3
Dry charge, max. approx.	l	4
Dry charge, max. approx.	kg	6
Mixing pan diameter	mm	280
Mixing pan design		detachable
Tilting arm design		pneumatically
Power mixing star	kW	0,25
Power mixing pan	kW	0,12
Pneumatic	bar	min. 6 bar, 17 l/min
Voltage	V	230
Frequency	Hz	50
Weight approx.	kg	100

# ZZ 30 E ZZ 30 HE



Mixing

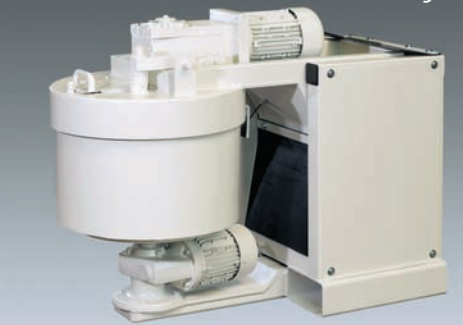


ZZ 30 E, Stationary mixer with detachable mixing pan  
ZZ 30 HE, Stationary mixer with mobile mixing pan

ZZ 30 E



ZZ 30 HE



## Special equipment

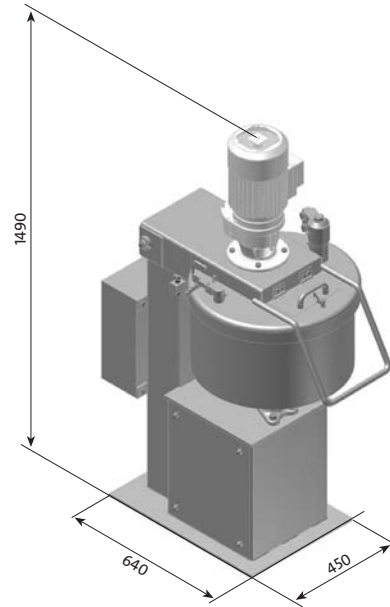
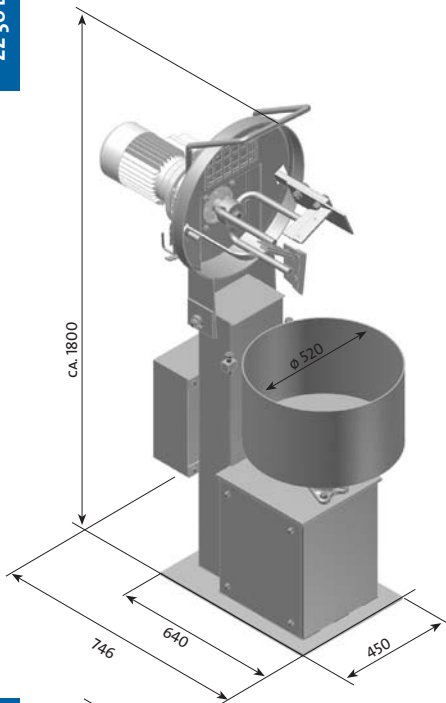
- High-speed whirler 1500 rpm, 0,37 kW
- Variable speeds
- Mixing pan and mixing tools in stainless or special steel or plastic coated
- Individual voltage/frequency layout

## Operational features

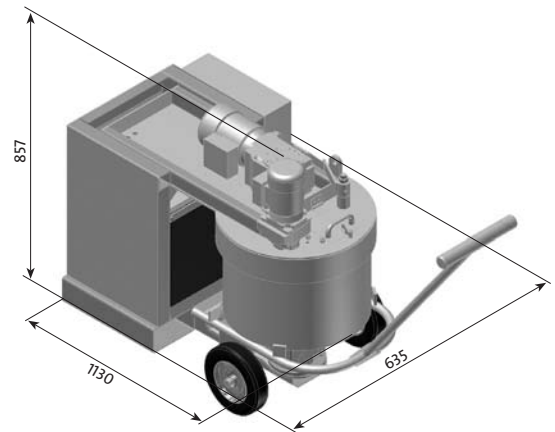
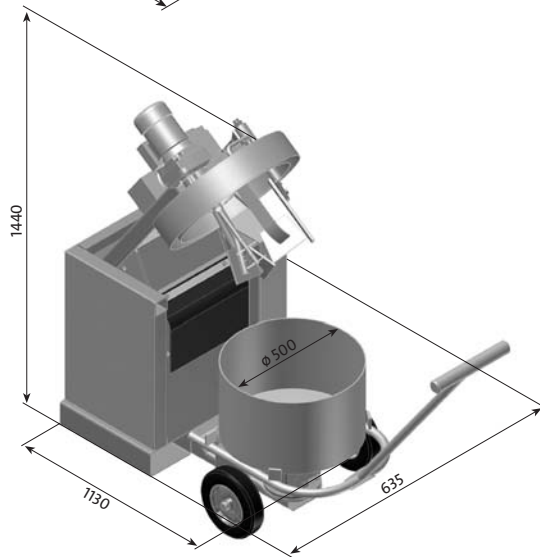
When switched on electrically, the mixing star cannot rotate as long as the tilting arm is in the raised (loading) position. After loading, the tilting arm is lowered to the closed position following which the mixing star is actuated by an integrated proximity switch. On raising the tilting arm, the mixing star stops automatically.

Raising and lowering are done manually (ZZ 30 E) or hydraulically (ZZ 30 HE). The mixing pan rests on a ball bearing turntable and is easily detachable. Visual checkig during mixing is possible through an inspection cover on the tilting arm. The ZZ 30 HE can be easily transported by a fork lift trolley.

ZZ 30 E



ZZ 30 HE



		ZZ 30 E	ZZ 30 HE
Batch capacity (ready-made mix)	l	30	30
Dry charge, max. approx.	l	40	40
Dry charge, max. approx.	kg	50	50
Mixing pan diameter	mm	512	500
Mixing pan design		detachable	mobile
Tilting arm design		manually	hydraulically
Power mixing star	kW	1,5	1,5
Power hydraulic	kW		1,1
Power mixing pan	kW	-	0,75
Voltage	V	400	400
Frequency	Hz	50	50
Weight approx.	kg	180	350



# ZK 30 E



Mixing



## Stationary mixer with tiltable mixing pan



### Sonderausstattung

- High-speed whirler 1500 rpm, 0,37 kW
- Variable speeds
- Mixing pan and mixing tools in stainless or special steel or plastic coated
- Individual voltage/frequency layout

### Operational features

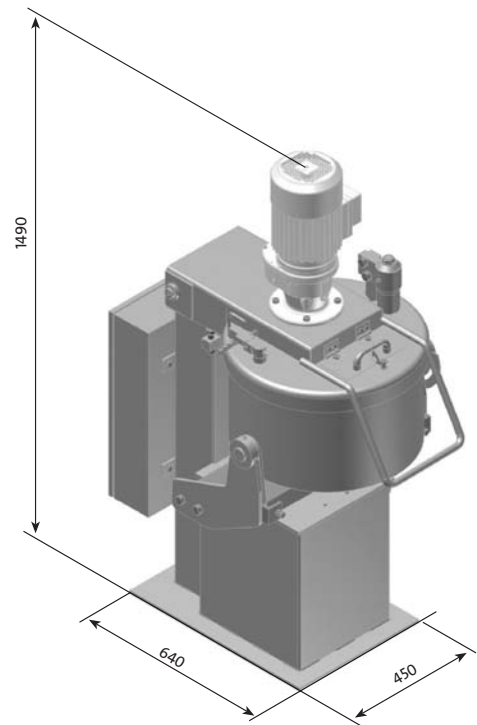
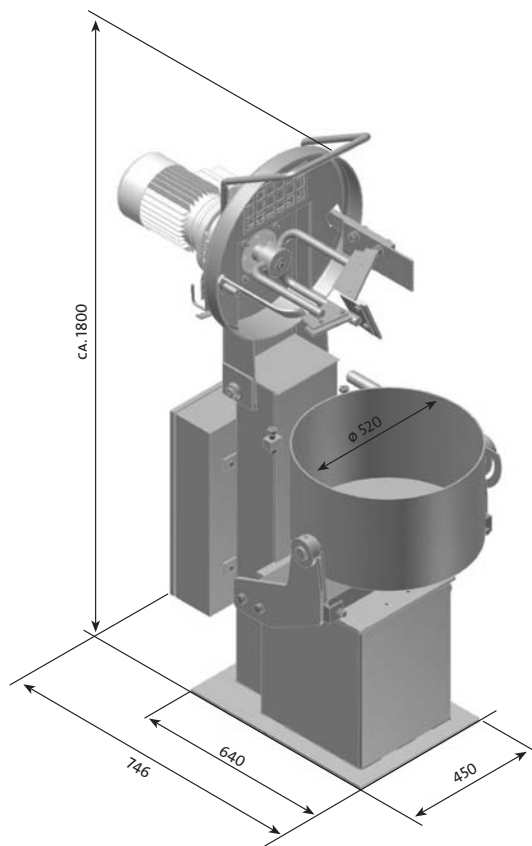
When switched on electrically, the mixing star cannot rotate as long as the tilting arm is in the raised (loading) position. After loading, the tilting arm is lowered to the closed position following which the mixing star is actuated by an integrated proximity switch.

On raising the tilting arm, the mixing star stops automatically. Raising and lowering are done manually. The mixing pan rests on a ball bearing turntable.

By pulling the hand lever, the pan is tilted forward.

Visual checking during mixing is possible through an inspection cover on the tilting arm.





## ZK 30 E

Batch capacity (ready-made mix)	l	30
Dry charge, max. approx.	l	40
Dry charge, max. approx.	kg	50
Mixing pan diameter	mm	512
Mixing pan design		manually tiltable
Tilting arm design		manually
Power mixing star	kW	1,5
Power hydraulic	kW	-
Voltage	V	400
Frequency	Hz	50
Weight approx.	kg	180

# ZK 30 HE ZK 50 HE



Mixing



Stationary mixer with tiltable mixing pan  
The mixer can be easily transported by a fork lift trolley

ZK 30 HE  
ZK 50 HE



### Special equipment

- High-speed whirler 1500 rpm, 0,37 kW
- Variable speeds
- Mixing pan and mixing tools in stainless or special steel or plastic coated
- Individual voltage/frequency layout

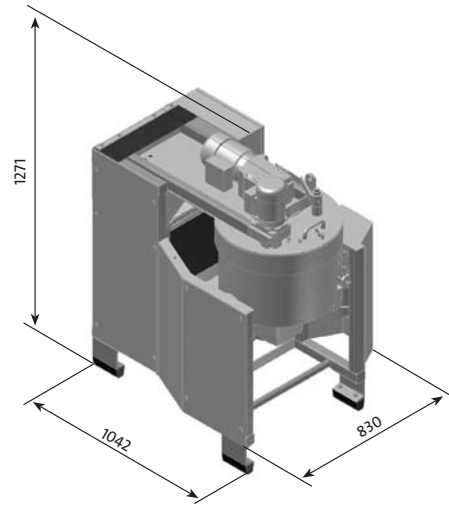
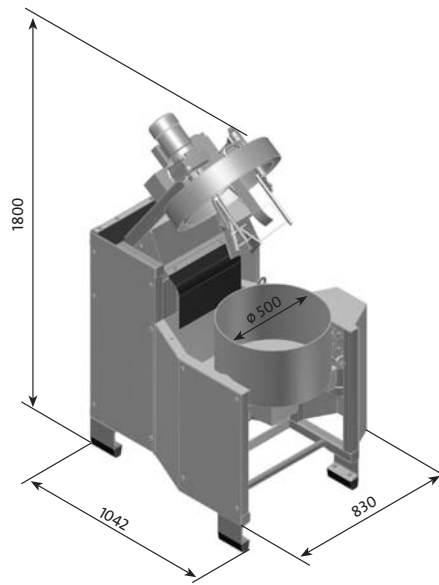
### Operational features

When switched on (electrically), the mixing star cannot rotate as long as the tilting arm is in the raised (loading) position. After loading, the tilting arm is lowered to the closed position following which the mixing star is actuated by an integrated proximity switch.

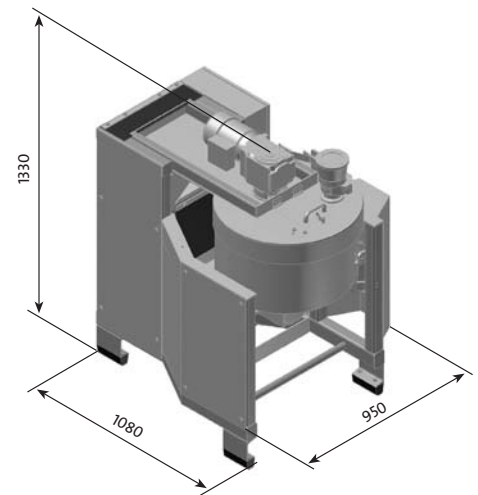
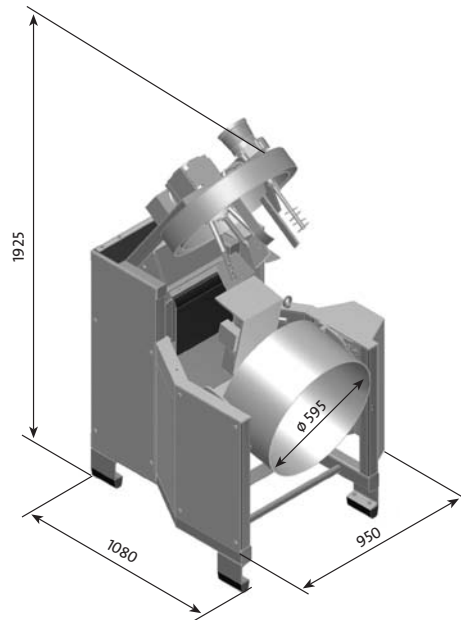
On raising the tilting arm, the mixing star stops automatically. Raising and lowering are done hydraulically. All operations are actuated by push buttons.

Visual checking during mixing is possible through an inspection cover on the tilting arm.

ZK 30 HE



ZK 50 HE



		ZK 30 HE	ZK 50 HE
Batch capacity (ready-made mix)	l	30	50
Dry charge, max. approx.	l	38	56
Dry charge, max. approx.	kg	50	80
Mixing pan diameter	mm	500	597
Mixing pan design		electrically tiltable	electrically tiltable
Tilting arm design		hydraulically	hydraulically
Power mixing star	kW	1,5	1,5
Power hydraulic	kW	1,1	1,1
Power mixing pan	kW	0,75	0,75
Power mixing pan tilting	kW	0,12	0,12
Voltage	V	400	400
Frequency	Hz	50	50
Weight approx.	kg	450	450

ZZ 50 HE  
ZZ 75 HE  
ZZ 100 HE  
ZZ 150 HE



Mixing



### Stationary mixer with tiltable mixing pan only for ZZ50HE, ZZ75 HE



#### Special equipment

- High-speed whirler 1500 rpm, 1,5/4 kW
- Variable speeds
- Mixing pan and mixing tools in stainless or special steel or plastic coated
- Individual voltage/frequency layout

#### Operational features

When switched on electrically, the mixing star cannot rotate as long as the tilting arm is in the raised (loading) position and the mixing pan not in mixing position. After loading, the tilting arm is lowered to the closed position following which the mixing star is actuated by an integrated proximity switch. On raising the tilting arm, the mixing star stops automatically. Raising and lowering are done hydraulically. Visual checking during mixing is possible through an inspection cover on the tilting arm.

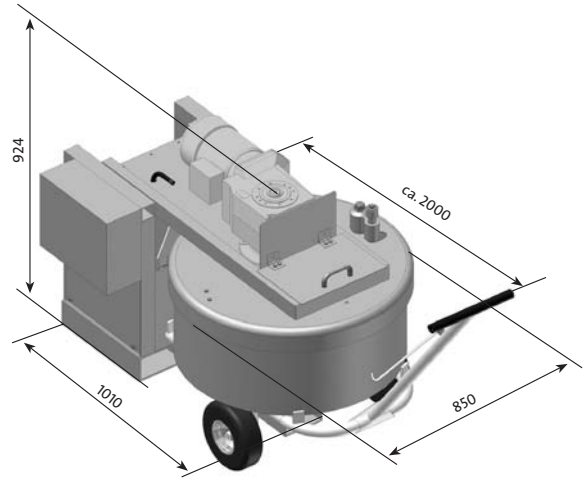
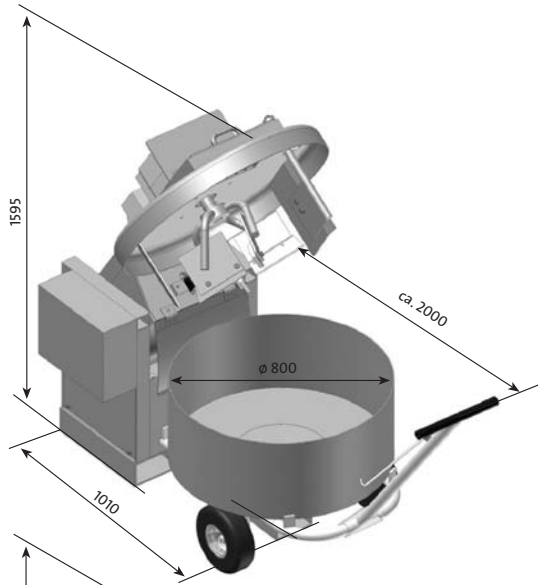
#### Type ZZ 50 HE and ZZ 75 HE

The mixing pan rests on a ball bearing turntable and is easily detachable. Visual checkig during mixing is possible through an inspection cover on the tilting arm. The ZZ 50 HE and ZZ 75 HE can be easily transported by a fork lift trolley.

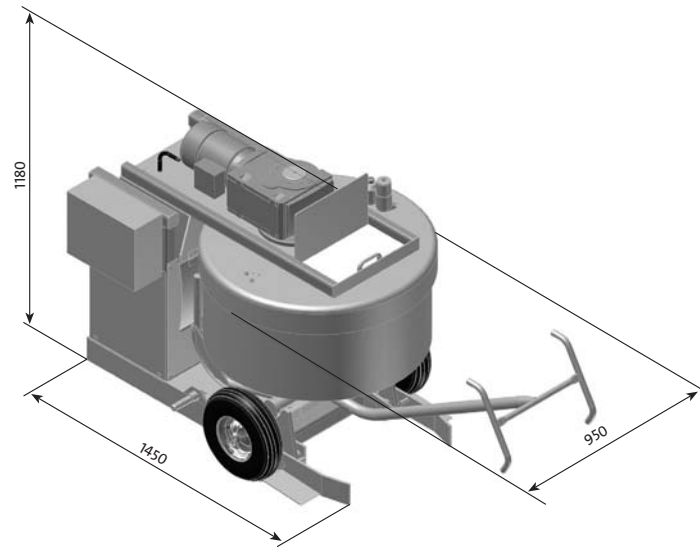
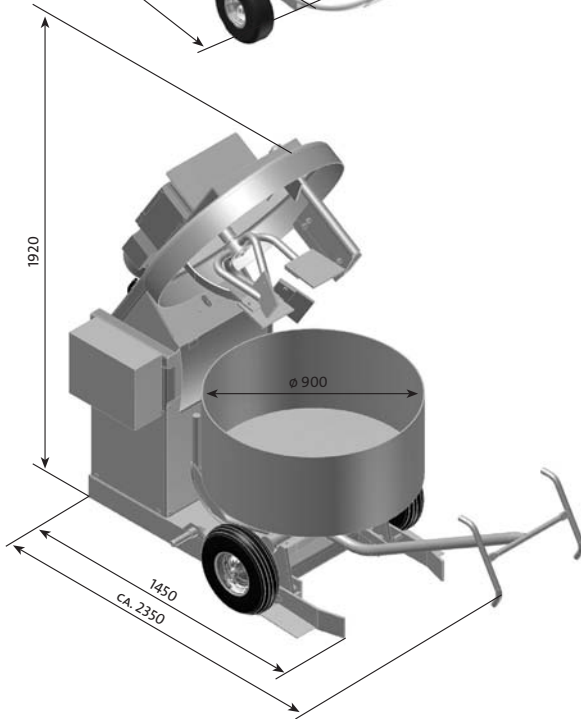
#### Type ZZ 100 HE and ZZ 150 HE

The mixing pan is mounted on the trolley.

ZZ 50 HE / ZZ 75 HE



ZZ 100 HE / ZZ 150 HE



		ZZ 50 HE	ZZ 75 HE	ZZ 100 HE	ZZ 150 HE
Batch capacity (ready-made mix)	l	50	75	100	150
Dry charge, max. approx.	l	80	108	120	170
Dry charge, max. approx.	kg	90	120	170	240
Mixing pan diameter	mm	700	800	840	900
Mixing pan design		mobile	mobile	mobile	mobile
Tilting arm design		hydraulically	hydraulically	hydraulically	hydraulically
Power mixing star	kW	2,2	2,2	4	4
Power hydraulic	kW	1,1	1,1	1,1	1,1
Voltage	V	400	400	400	400
Frequency	Hz	50	50	50	50
Weight approx.	kg	450	460	590	600

The ZZ 50 HE is similar to the ZZ 75 HE, but with smaller mixing pan and tools.

The ZZ 100 HE is similar to the ZZ 150 HE, but with smaller mixing pan and tools.

# ZK 75 HE ZK 150 HE



Mixing



## Stationary mixer with tiltable mixing pan



### Special equipment

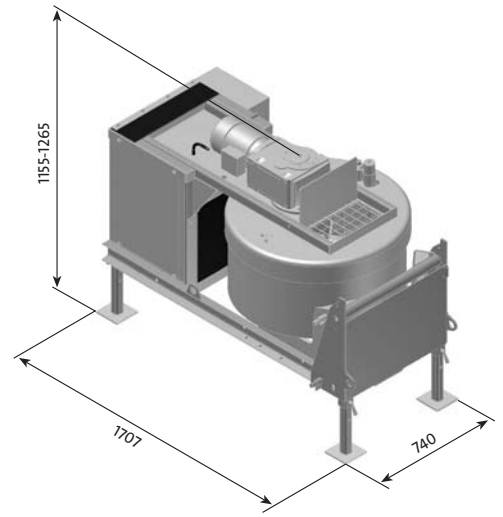
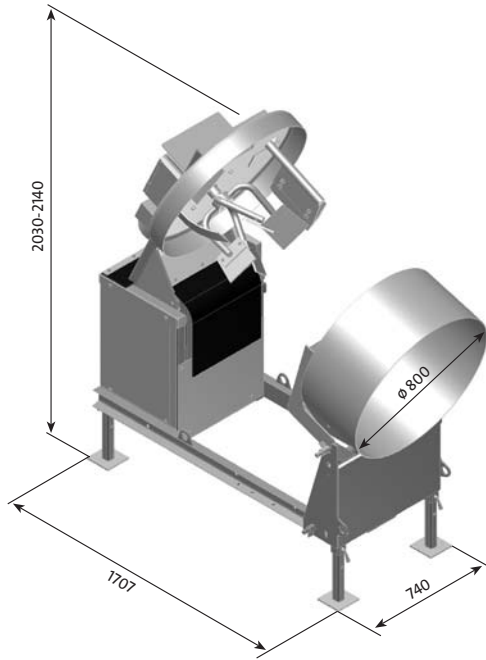
- High-speed whirler 1500 rpm, 1,5 / 4 kW
- Mixing pan drive, 1,5 kW
- Variable speeds
- Mixing pan and mixing tools in stainless steel or special steel or plastic coated
- Hydraulically operated skip (ZK 150 HEA)
- Rigid axle with solid rubber tyres
- Individual voltage/frequency layout

### Operational features

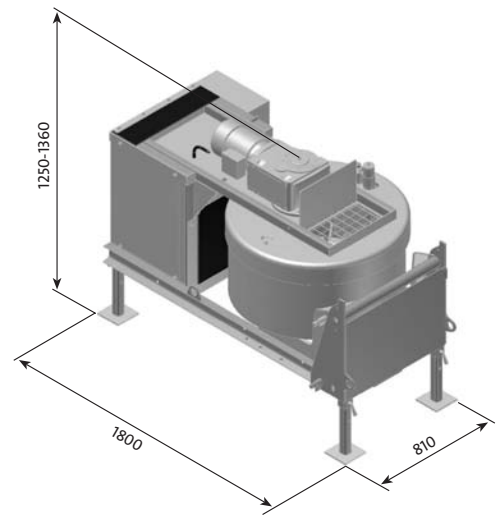
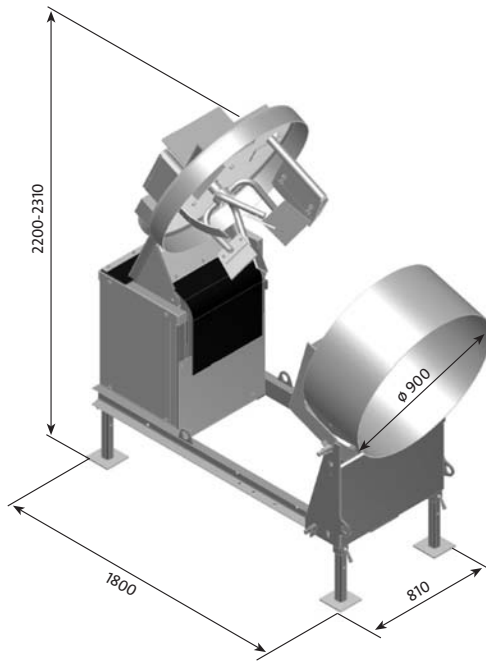
When switched on electrically, the mixing star cannot rotate as long as the tilting arm is in the raised (loading) position. After loading, the tilting arm is lowered to the closed position following which the mixing star is actuated by an integrated proximity switch. On raising the tilting arm, the mixing star stops automatically.

Raising and lowering of the tilting arm as well as tilting of the mixing pan and skip (ZK 150 HEA) are done hydraulically via manual control valves. Visual checking during mixing is possible through an inspection cover on the tilting arm.

ZK 75 HE



ZK 150 HE



		ZK 75 HE	ZK 150 HE	ZK 150 HEA
Batch capacity (ready-made mix)	l	75	150	150
Dry charge, max. approx.	l	108	170	170
Dry charge, max. approx.	kg	120	240	240
Mixing pan diameter	mm	800	900	900
Mixing pan design		hydraulically tiltable	hydraulically tiltable	hydraulically tiltable
Tilting arm design		hydraulically	hydraulically	hydraulically
Power mixing star	kW	2,2	4	4
Power hydraulic	kW	1,5	1,5	1,5
Voltage	V	400	400	400
Frequency	Hz	50	50	50
Weight approx.	kg	780	800	990

The ZK 75 HE is similar to the ZK 150 HE, but with smaller mixing pan and tools.



# ZK 250 HE ZK 250 HEA

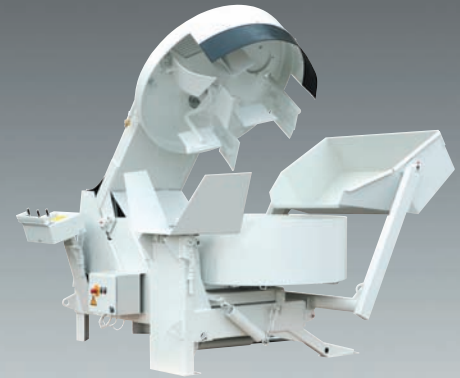
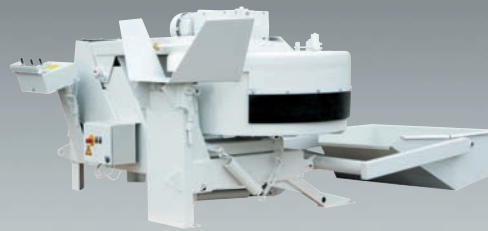


Mixing



## Stationary mixer with tiltable mixing pan

ZK 250 HEA



### Special equipment

- High-speed whirler 1500 rpm, 4 kW
- Variable speeds
- Mixing pan and mixing tools in stainless or special steel or plastic coated
- Mixing pan drive, 1,5 kW
- Hydraulically operated skip (type HEA)
- Hydraulically lowered axle and tow bar
- Individual voltage/frequency layout
- Mirror-inverted version

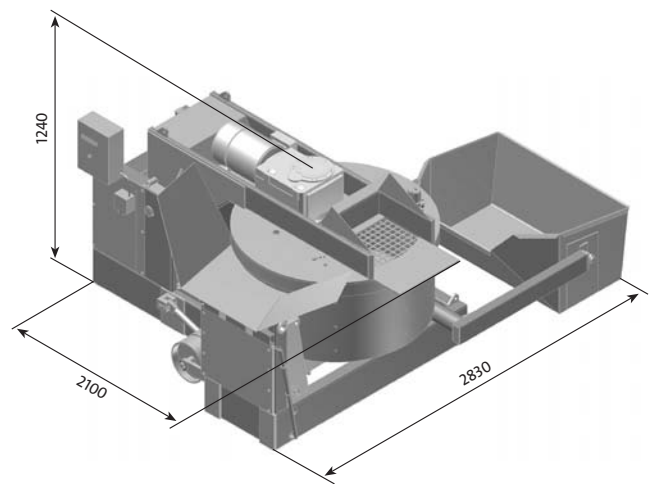
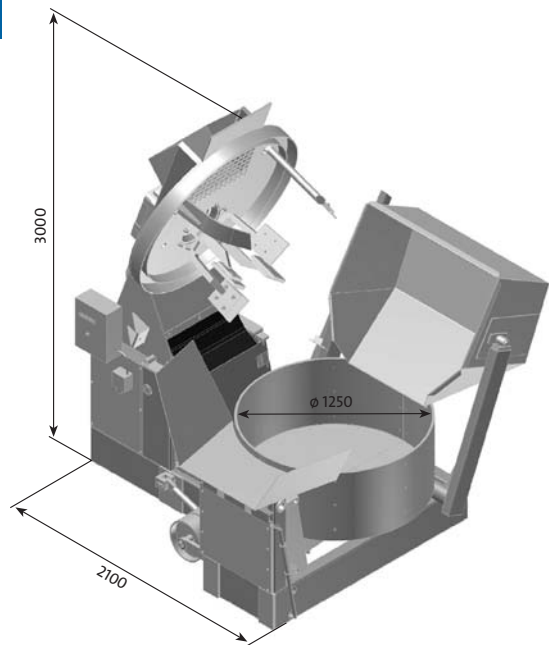
### Operational features

When switched on electrically, the mixing star cannot rotate as long as the tilting arm is in the raised (loading) position. After loading, the tilting arm is lowered to the closed position following which the mixing star is actuated by an integrated proximity switch.

On raising the tilting arm, the mixing star stops automatically. Raising and lowering of the tilting arm as well as tilting of the mixing pan and skip (type HEA) are done hydraulically via manual control valves.

Visual checking during mixing is possible through an inspection cover on the tilting arm.

ZK 250 HE



		ZK 250 HE	ZK 250 HEA
Batch capacity (ready-made mix)	l	250	250
Dry charge, max. approx.	l	365	365
Dry charge, max. approx.	kg	400	400
Mixing pan diameter	mm	1250	1250
Mixing pan design		hydraulically tiltable	hydraulically tiltable
Tilting arm design		hydraulically	hydraulically
Power mixing star	kW	7,5	7,5
Power hydraulic	kW	4	4
Power mixing pan	kW	-	-
Voltage	V	400	400
Frequency	Hz	50	50
Weight approx.	kg	1400	1700

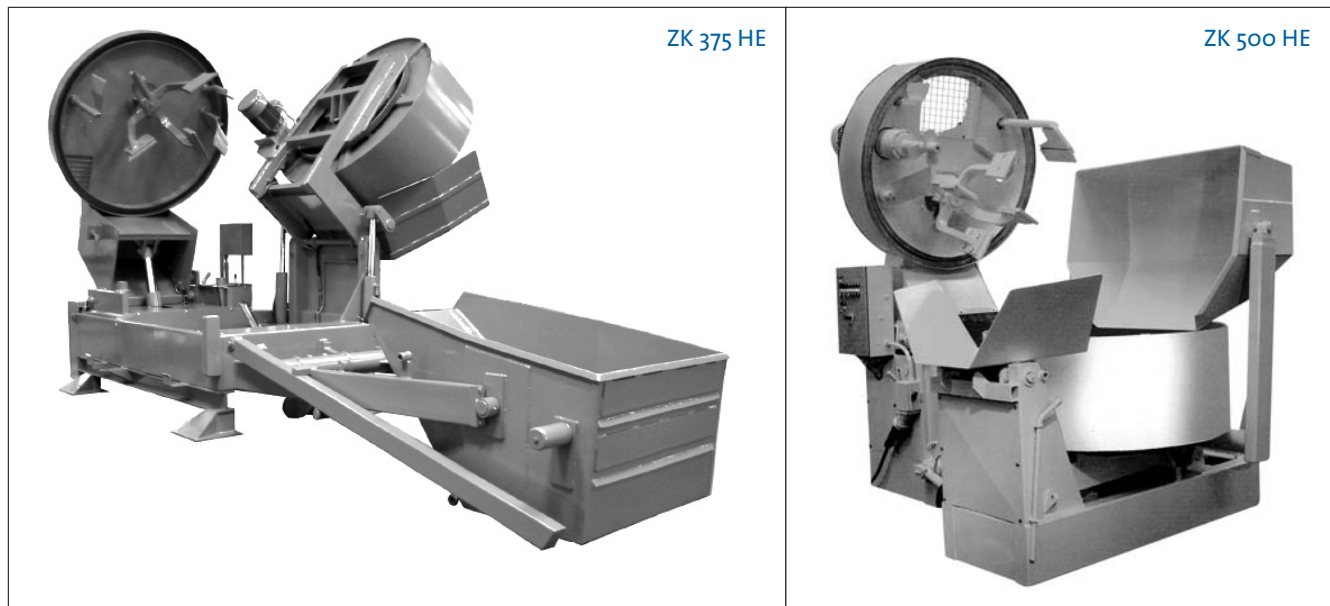
ZK 375 HE  
ZK 375 HEA  
ZK 500 HE  
ZK 500 HEA



Mixing



### Stationary mixer with tiltable mixing pan



#### Special equipment

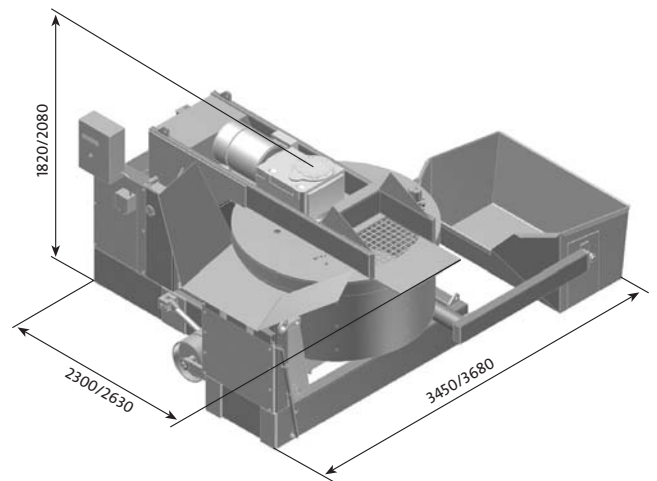
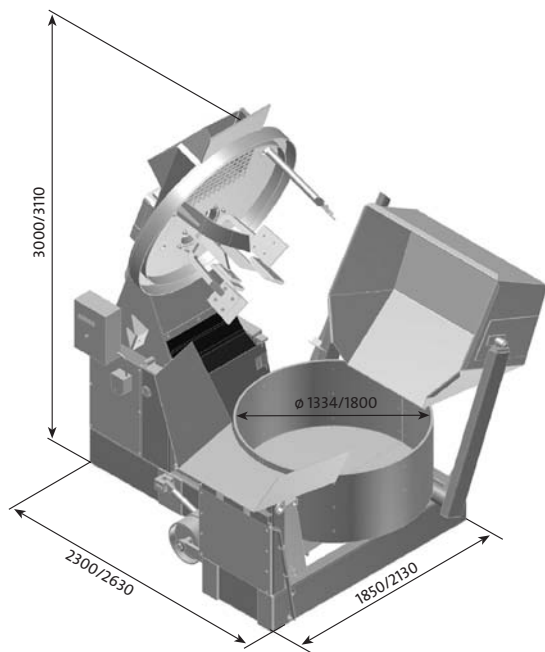
- High-speed whirler 1500 rpm, 7,5 kW
- Variable speeds
- Mixing pan and mixing tools in stainless or special steel or plastic coated
- Mixing pan drive 3 / 5,5 kW
- Hydraulically operated skip (type HEA)
- Hydraulically lowered axle and tow bar (ZK 375)
- Individual voltage/frequency layout
- Mirror-inverted version

#### Operational features

When switched on electrically, the mixing star cannot rotate as long as the tilting arm is in the raised (loading) position. After loading, the tilting arm is lowered to the closed position following which the mixing star is actuated by an integrated proximity switch.

On raising the tilting arm, the mixing star stops automatically. Raising and lowering of the tilting arm as well as tilting of the mixing pan and skip (type HEA) are done hydraulically via push buttons.

Visual checking during mixing is possible through an inspection cover on the tilting arm.



		ZK 375 HE	ZK 375 HEA	ZK 500 HE	ZK 500 HEA
Batch capacity (ready-made mix)	l	375	375	500	500
Dry charge, max. approx.	l	500	500	865	865
Dry charge, max. approx.	kg	600	600	800	800
Mixing pan diameter	mm	1334	1334	1704	1704
Mixing pan design		hydraulically tiltable	hydraulically tiltable	hydraulically tiltable	hydraulically tiltable
Tilting arm design		hydraulically	hydraulically	hydraulically	hydraulically
Power mixing star	kW	11	11	15	15
Power hydraulic	kW	4	4	5,5	5,5
Power mixing pan	kW	3	3	5,5	5,5
Voltage	V	400	400	400	400
Frequency	Hz	50	50	50	50
Weight approx.	kg	3000	3400	4250	5500

**Pemat Mischtechnik GmbH**

Hauptstraße 29

D-67361 Freisbach

Telefon (+49) 063 44-94 49-0

Telefax (+49) 063 44-94 49-500

info@pemat.de

www.pemat.de

If our rotating pan mixer has convinced you and you are searching for further solutions we gladly present you high-quality alternatives from our product range. Our offer includes a wide range of mixers (pan mixer, conical mixer, rotating pan mixer, planetary mixer) to meet your requirements, skip hoist and complete batching plants.

As you can see we are ready for everyone future venture and would be pleased to contribute to your next project. On Pemat you can rely!

