

A member of **TOPWERK**

 **PRINZING PFEIFFER**

## **MACHINES AND PRODUCTION EQUIPMENT FOR PIPES, MANHOLES AND PRECAST CONCRETE ELEMENTS**



**LEADING WITH PROVEN TECHNOLOGY**

# After Sales Service

The service team is available for any questions you might have and we are glad to assist you at any time. Our main goal is to satisfy your requests on a premium level.

Benefit from our continuously growing service range. We offer services that provides an excellent equipment availability, for example:



Spare parts

High quality spare parts and competent technical advice - worldwide



Help-Desk

Problem solving with capable assistance



Teleservice

Efficient assistance and technical support via teleservice



Monitoring

Secure – fast – information available everywhere



Consulting

Professional guidance on all questions regarding process engineering



Retrofit

Optimized retrofits due to continuous developments




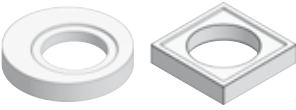

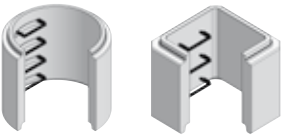





# Table of contents




	Content	Page
<b>Machine selection</b> Which machine for what products?	Products for sewerage	4
	Products for sewage water treatment and rainwater utilization	5
	Products for drainage	6
	Products for fresh water supply	8
	Products for power supply ducts and telecommunication	8
	Other concrete products	9
<b>Machine overview</b>	ATLAS	10
	BLIZZARD	14
	MISTRAL	18
	PRIMUSS	22
	RADIAL PRESS RP	26
	TORNADO	30
	VARIANT	34
	ZELUS	38
<b>Accessories</b>	Moulds and formworks	42
	Handling systems, Pipe and Manhole Processing Machinery	44
	Cage Welding Machinery	46
	Compulsory concrete mixer	48
<b>PRINZING-PFEIFFER</b> in the course of the history	Prinzling 1862	50
	Pfeiffer 1900	52
	PRINZING-PFEIFFER today	54
<b>Production processes</b>	Radial-Pressing-Process	55
	Vibro-Compaction and Pressing method	55

# Machine selection

## Products for sewerage

	ATLAS	BLIZZARD	MISTRAL	PRIMUSS	RP	TORNADO	VARIANT	ZELUS
 <p>manhole cover slabs</p>		•				•		
 <p>manhole cover frames</p>	•	•	•			•		•
 <p>seating rings</p>	•	•	•			•		•
 <p>cover slabs</p>	•		•			•		•
 <p>cones</p>	•		•			•	•	
 <p>manholes</p>	•	•	•			•	•	
 <p>manhole base units</p>	•	•	•	•		•	•	
 <p>shaft pipes</p>	•		•			•	•	
 <p>concrete pipes</p>	•		•		•		•	

# Products for sewerage

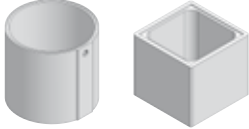



	ATLAS	BLIZZARD	MISTRAL	PRIMUSS	RP	TORNADO	VARIANT	ZELUS
 egg-shaped pipes	•		•			•		
 prebed pipes	•		•			•		
 jacking pipes	•			•		•		

# Products for sewage water treatment and rainwater utilization system

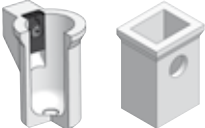


	ATLAS	BLIZZARD	MISTRAL	PRIMUSS	RP	TORNADO	VARIANT	ZELUS
 septic tanks	•							
 three chamber rings	•		•			•		
 three chamber base units	•							
 tank cones	•		•			•		

# Machine selection









## Products for sewage water treatment and rainwater utilization system

	ATLAS	BLIZZARD	MISTRAL	PRIMUSS	RP	TORNADO	VARIANT	ZELUS
 <p>concrete tanks</p>	•		•			•		
 <p>separator tanks</p>	•		•			•	•	
 <p>egg-shaped tanks</p>	•							
 <p>cover for egg-shaped tanks</p>	•							•

## Products for drainage

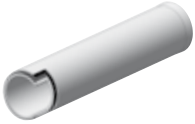
	ATLAS	BLIZZARD	MISTRAL	PRIMUSS	RP	TORNADO	VARIANT	ZELUS
 <p>street gullies</p>	•		•			•		
 <p>roof drainage shafts</p>	•	•	•			•		•
 <p>drainage channels</p>	•	•						•

# Products for drainage




	ATLAS	BLIZZARD	MISTRAL	PRIMUSS	RP	TORNADO	VARIANT	ZELUS
 <p>drainage pipes</p>	•		•		•	•	•	
 <p>drainage rings</p>	•		•			•	•	
 <p>slotted drain pipes</p>	•		•		•		•	
 <p>box culverts</p>	•					•	•	
 <p>dual box culverts</p>	•							
 <p>box culverts with partition</p>	•							
 <p>U-channels</p>		•					•	
 <p>slot drainage channels</p>			•			•		

# Machine selection

## Products for fresh water supply


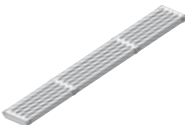
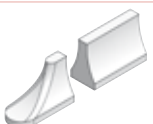




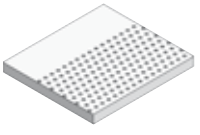
	ATLAS	BLIZZARD	MISTRAL	PRIMUSS	RP	TORNADO	VARIANT	ZELUS
 pressure pipes				•				

## Products for power supply ducts and telecommunication

	ATLAS	BLIZZARD	MISTRAL	PRIMUSS	RP	TORNADO	VARIANT	ZELUS
 cable channels	•	•				•		•
 cable distribution boxes	•	•	•			•		•
 covers for cable distribution boxes		•						•

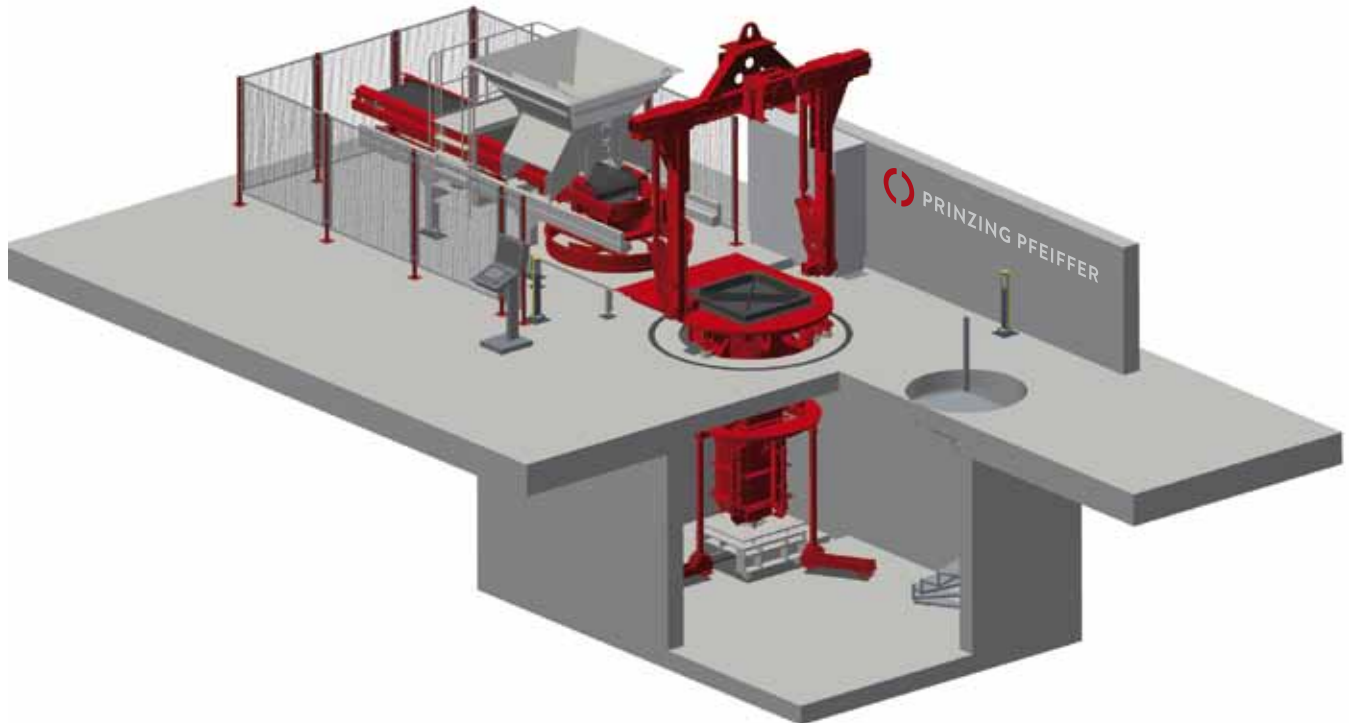


# Other concrete products

	ATLAS	BLIZZARD	MISTRAL	PRIMUSS	RP	TORNADO	VARIANT	ZELUS
 <p>retaining walls</p>		•						•
 <p>cattle slats</p>		•						•
 <p>road barriers</p>								•
 <p>foundation supports</p>	•							
 <p>sills</p>		•						•
 <p>window frames</p>		•						•
 <p>cellar wing walls</p>		•						•
 <p>paving slabs</p>		•						•

# ATLAS

## Flexible production system



The **ATLAS** is a modular system that combines the individual segments of concrete feeding, vibration compaction, pressing and transporting components into a work-able bespoke system providing flexibility and versatility for your production needs. Each technique delivers advanced technology developed and proven in all our fully automatic systems.

Together the individual constructed modular components make it possible to quickly prepare for repeat production or mould change to meet the demands of a wide range of products. Production with the **ATLAS** can be configured for either manual or semi-automatic operation. This wide scope of diversity and manufacturing ability make the relatively low investment cost for the **ATLAS** production platform an attractive decision for many producers.

### PRODUCT CAPABILITIES

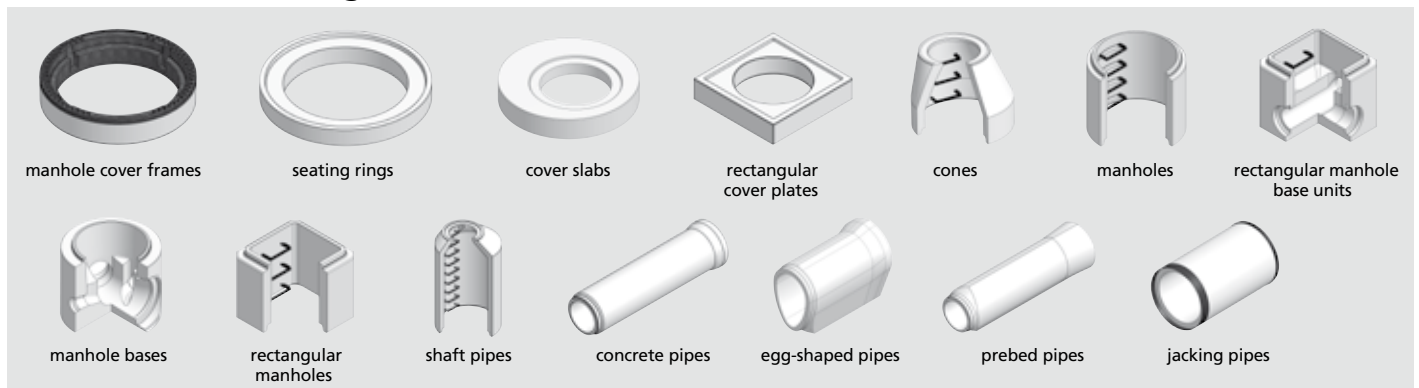
- Monolithic Manhole Tanks and Base Units
- Drainage Pipes and Rings
- Box Culverts and Rectangular Tanks
- Three Chamber Rings and Base Units
- Other Products for Sewerage, Drainage, Road applications

### Capacity data

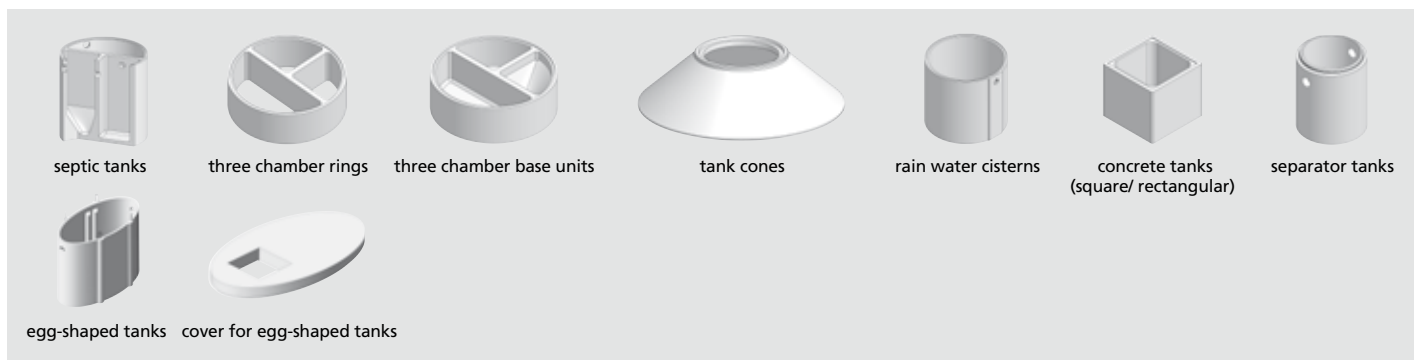
Product dimensions max. Ø	150 – 3.600 mm
Length max.	250 – 3.500 mm
Product weight max.	50 – 25.000 kg
Cycle times	3 – 25 min

## The ATLAS is very well suited for the production of

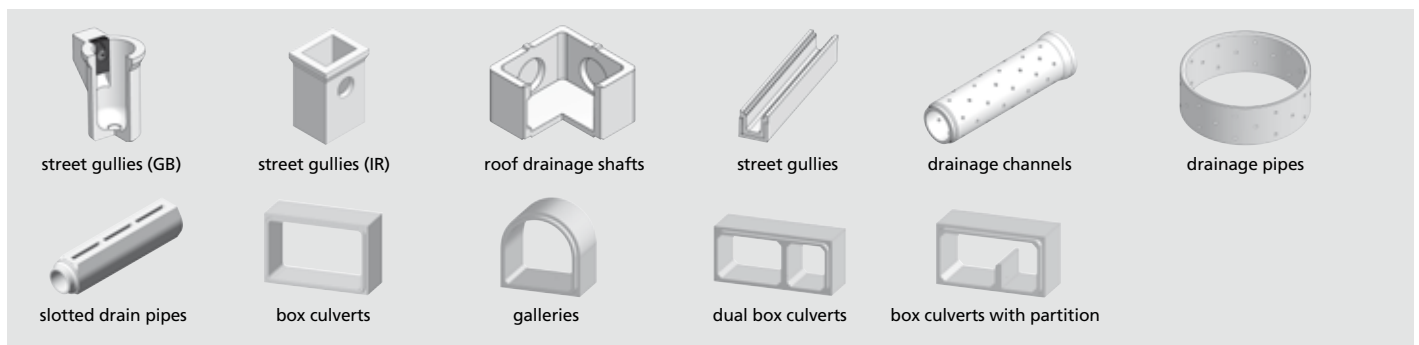
### Products for sewerage



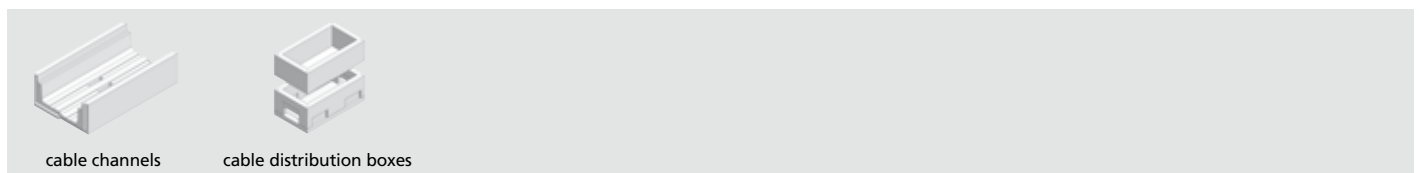
### Products for sewage water treatment and rainwater utilization



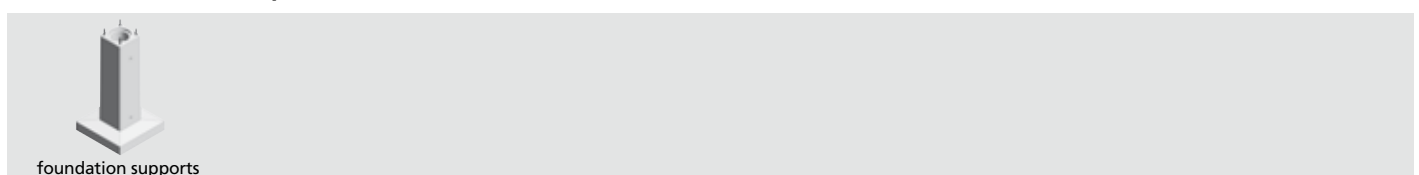
### Products for drainage



### Products for power supply ducts and telecommunication



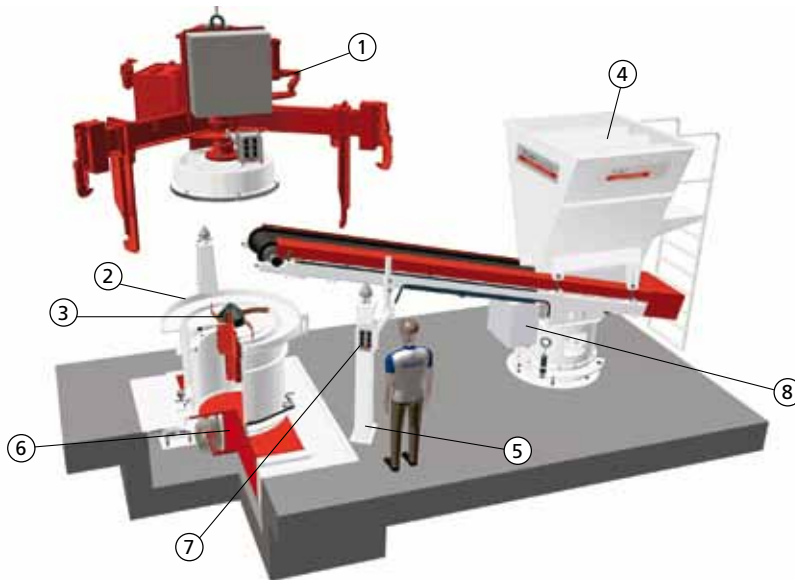
### Other concrete products



# ATLAS

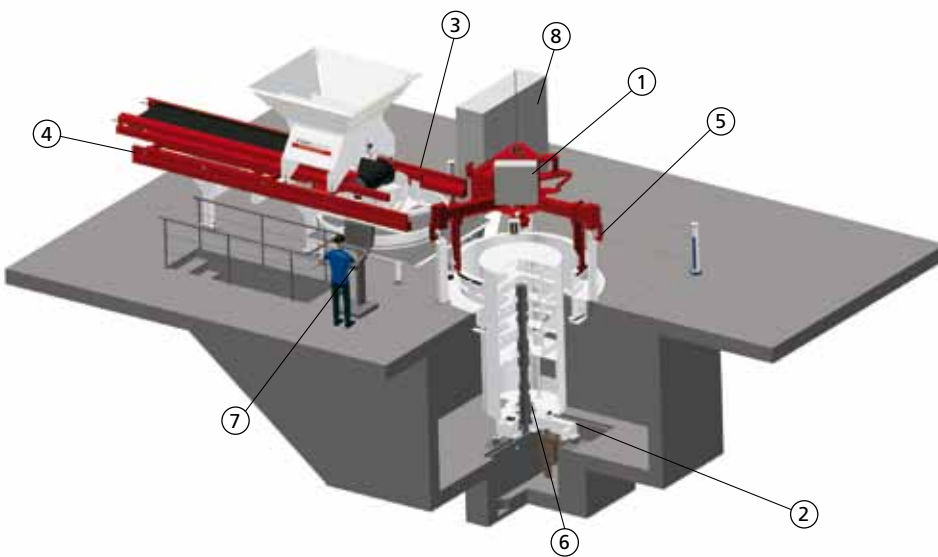
## Schematic construction of the ATLAS

### ATLAS 200/100



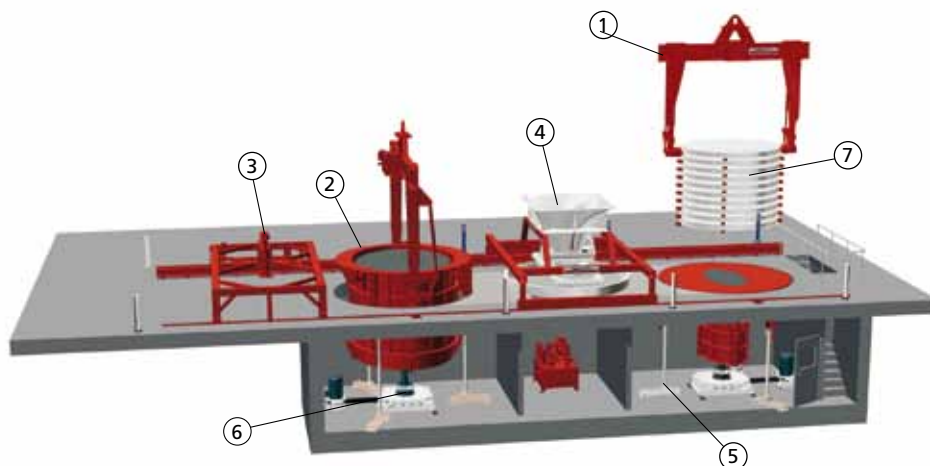
1. Lifting harness with press
2. Mould equipment
3. Distributor
4. Feeding unit
5. Supports for lifting harness
6. Vertical vibrator
7. Control unit
8. Power box

### ATLAS 200/250



1. Lifting harness with press
2. Mould equipment
3. Distributor
4. Feeding unit
5. Supports for lifting harness
6. Central vibrator
7. Control panel
8. Power box

### ATLAS 350/300



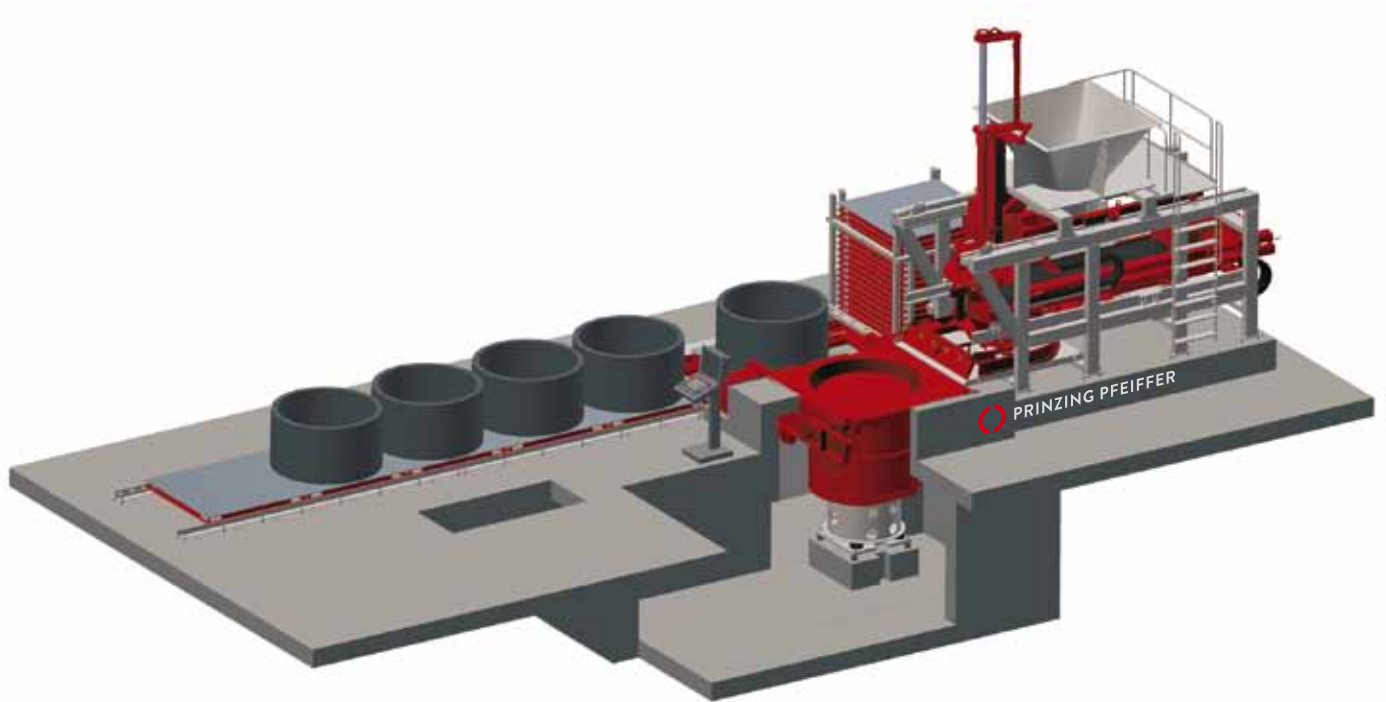
1. Turning device
2. Mould equipment
3. Linear press
4. Feeding unit
5. Ejection unit
6. Central vibrator
7. Steel pallets

Photo gallery ATLAS



# BLIZZARD

## Fully automatic tilting table machine



The stationary automatic **BLIZZARD** production equipment is designed around a 180° rotating tilt table station for the manufacturing of a wide range of products. The rotating process allows the production of products that previously were restricted to methods involving wet cast moulds and vibration tables. These items can now be manufactured by the use of full automation to achieve greater output and profitability.

The **BLIZZARD** technology allows improvement to production efficiency and the enhanced quality of numerous products to meet market demand. The developed vibration technology is precisely controlled allowing all freshly made product to be directly demoulded onto steel pallets for conveyor transfer to curing racks. The average time for a mould cassette change is 10 to 15 minutes this rapid exchange from one mould to another assists in advancing manufacturing flexibility creating client satisfaction.

The whole plant can be operated by a single operator.

### PRODUCT CAPABILITIES

- Cable Channels and Distribution boxes
- Drainage Channels
- Steps, Chimneys and other Building Products
- Landscape Elements (Paving Slabs, Columns and Wall Caps etc)
- Retaining Walls
- Manhole Base Units
- Median Barriers and other Road / Rail Products

### Capacity data

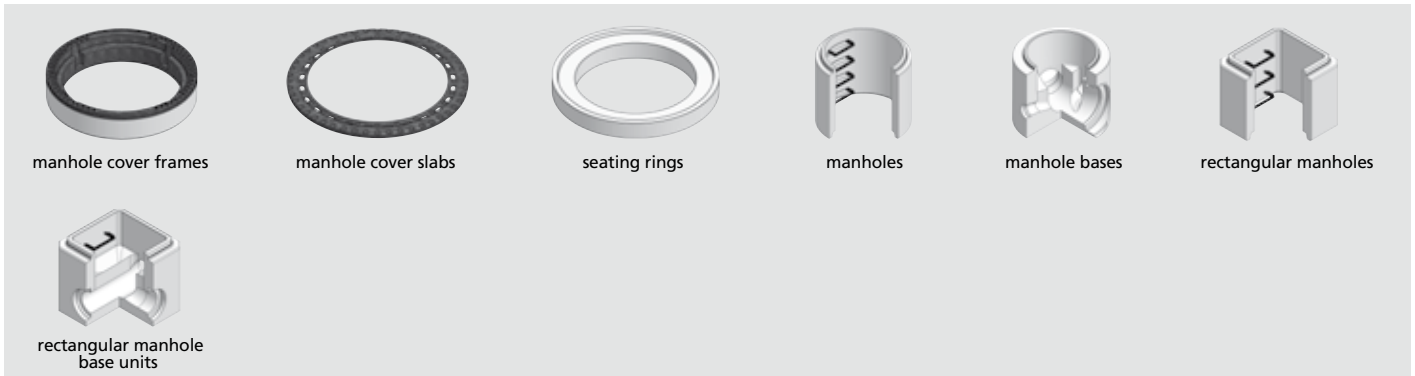
Product dimensions max.  
(LxWxH) 1.700 - 1.700 - 1.500 mm

Heights max.  
25 – 1.500 mm

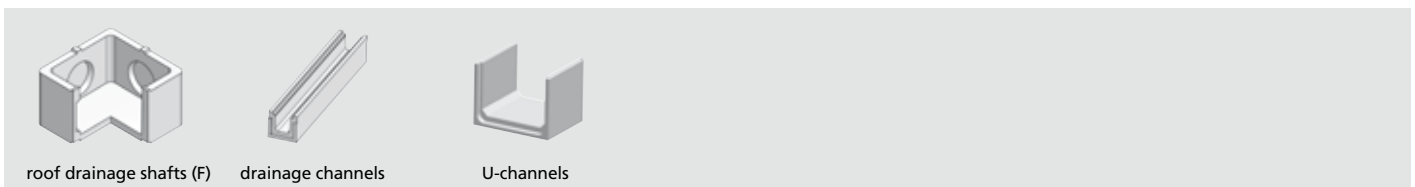
Product weight max. up to  
bis 5.000 kg

Cycle times  
1,5 – 5,5 min

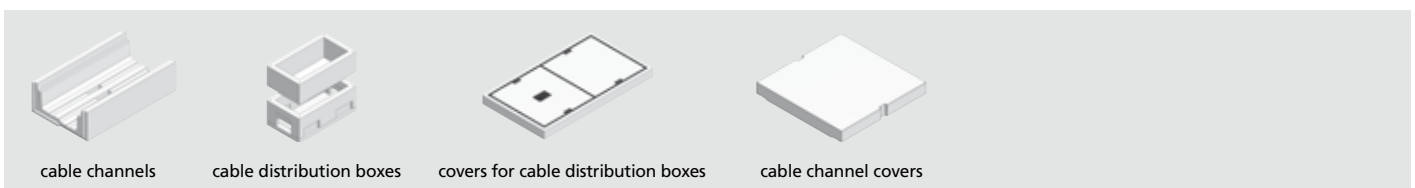
## The BLIZZARD is very well suited for the production of Products for sewerage



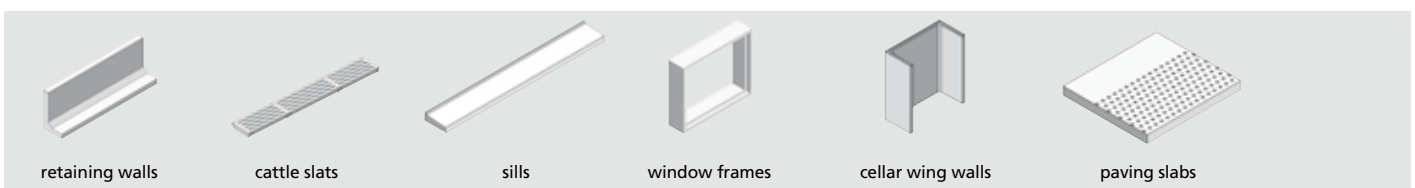
## Products for drainage



## Products for power supply ducts and telecommunication



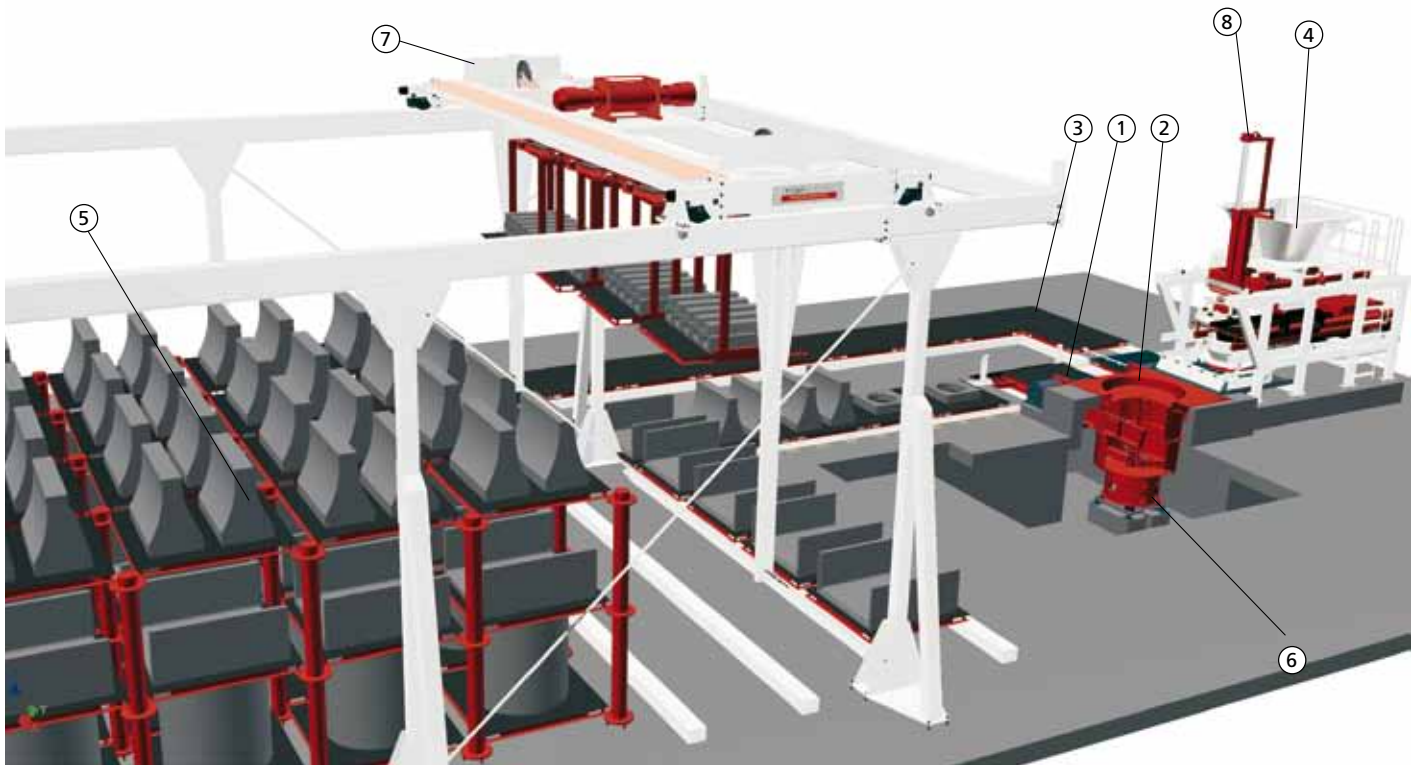
## Other concrete products



# BLIZZARD

## Schematic construction of the BLIZZARD

### BLIZZARD 180/150



1. Mould turning device  
2. Mould equipment

3. Pallet return device  
4. Feeding unit

5. Curing rack  
6. Vertical vibrator

7. Portal robot  
8. Press carriage

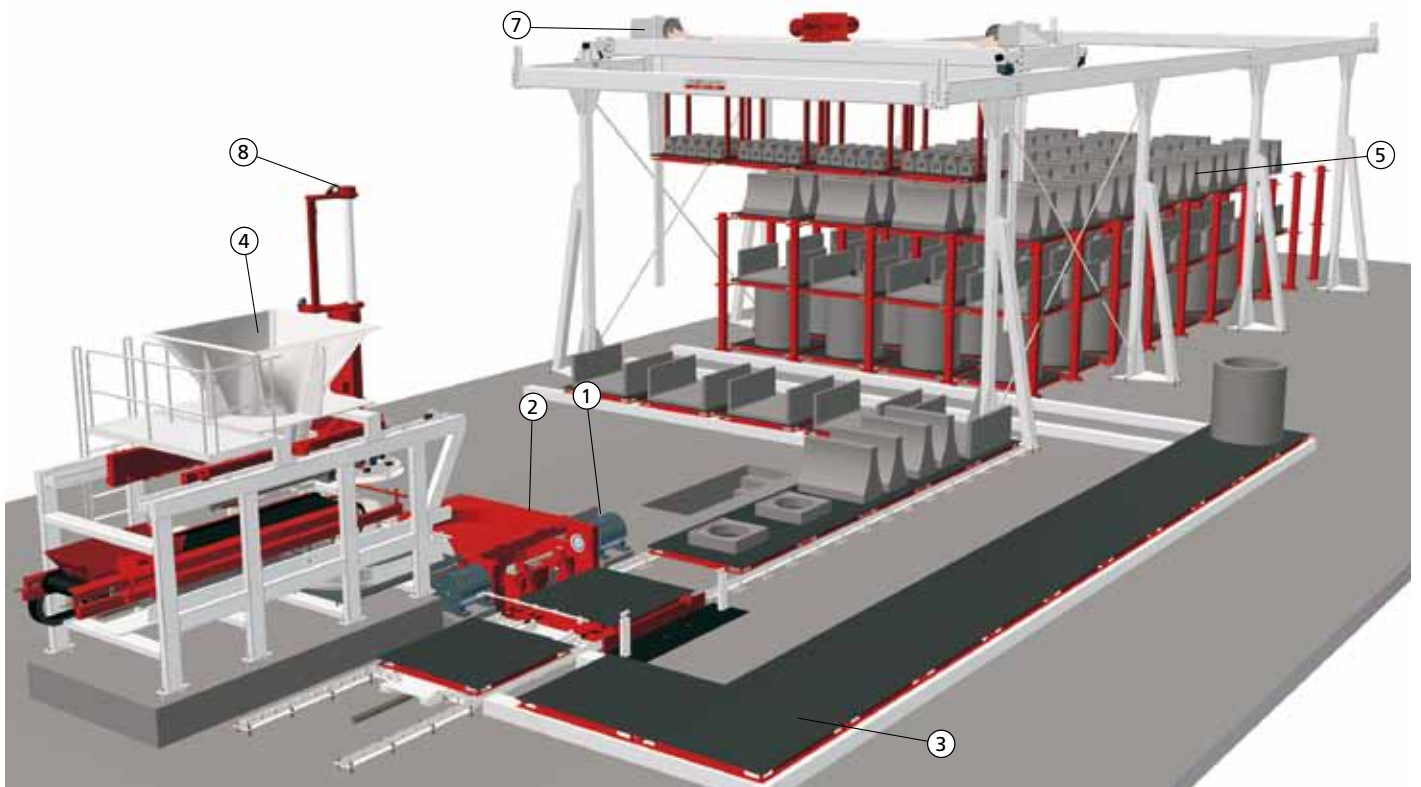
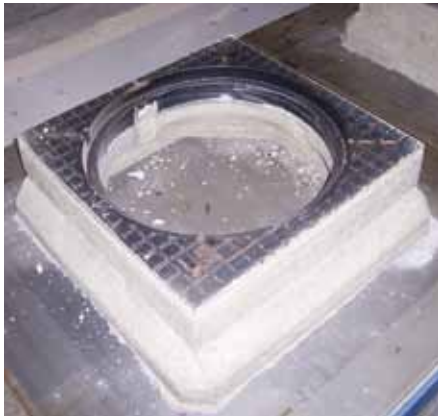


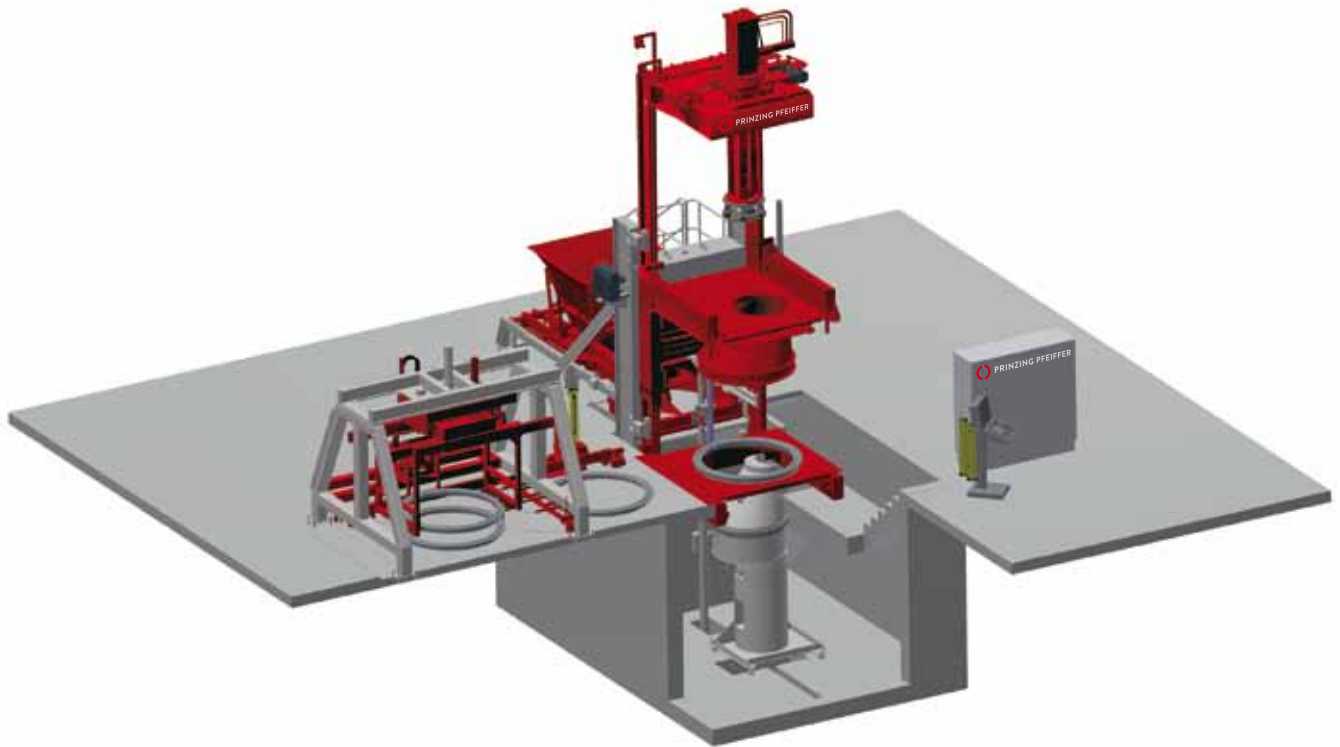


Photo gallery BLIZZARD



# MISTRAL

## Automatic concrete pipe and manhole machine



The versatile **MISTRAL** machine is designed for the production of pipes, manhole units, rectangular and square boxes. It offers good efficient cycle and mould changeover times across the various product types. Our patented GEBA process ensures the exact length precision of products. Precise forming of concrete pipe and manhole spigots can be achieved through our SYSTEM-OPTIMA method.

The **MISTRAL** utilizes a pit installed vibrator unit which reduces noise levels. The setup is accessible from three sides allowing optional handling systems to accommodate various product types (please see page 44 PRINZING-PFEIFFER Handling).

The highly effective central vibrator technology assures excellent product quality and together with tamper vibration providing exact concrete pipe spigots. The hydraulic mould clamping of outer case and inner core in conjunction with the automatic height adjustment provide efficient versatility at mould changeover.

The **MISTRAL** machine can be dedicated either to one type of product or across a scope of products.

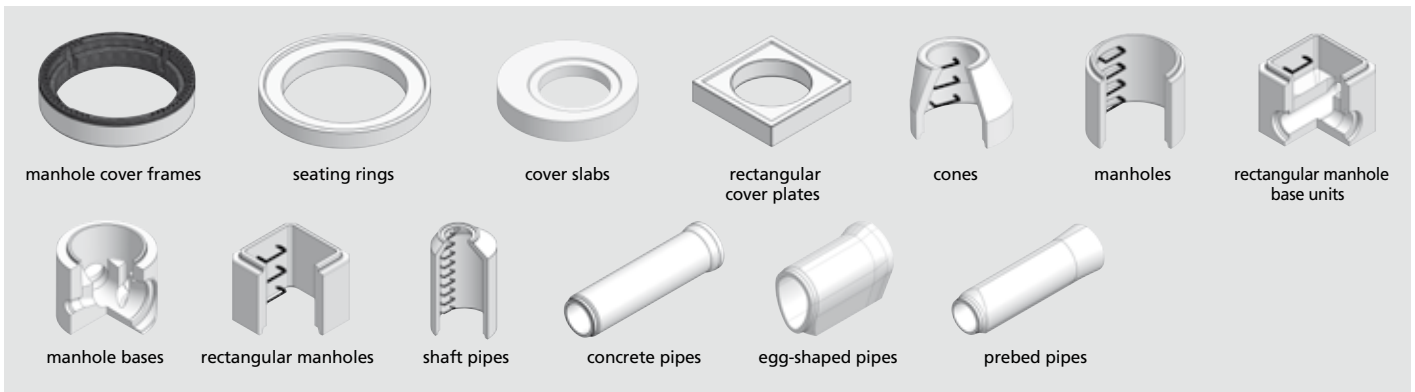
### PRODUCT CAPABILITIES

- Concrete Pipes
- Manholes, Tanks and Rings
- Box Culverts

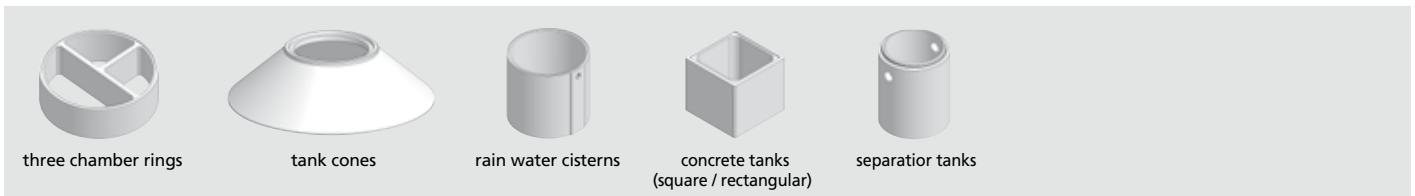
### Capacity data

Product dimensions max. Ø	150 – 2.000 mm
Lengths max.	250 – 2.500 mm
Product weight max.	50 – 5.000 kg
Cycle times	2 – 6 min

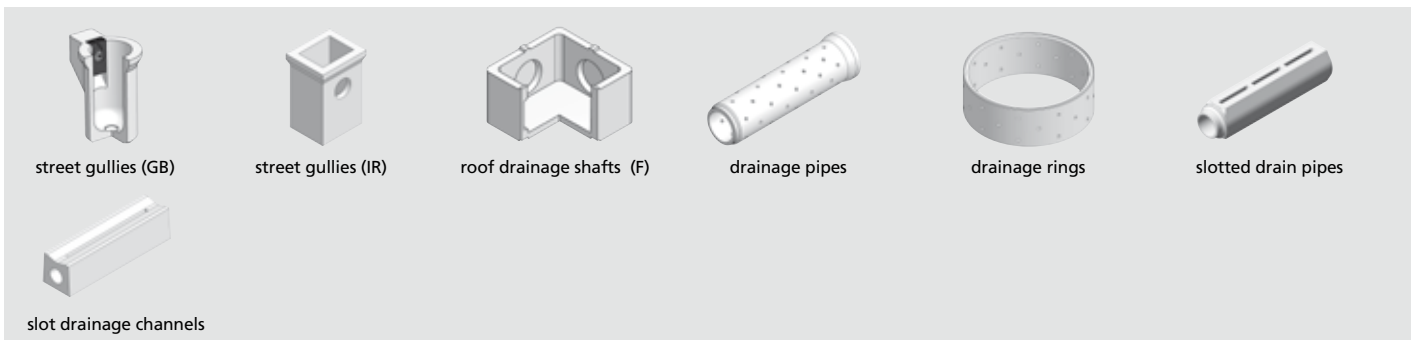
## The MISTRAL is very well suited for the production of Products for sewerage



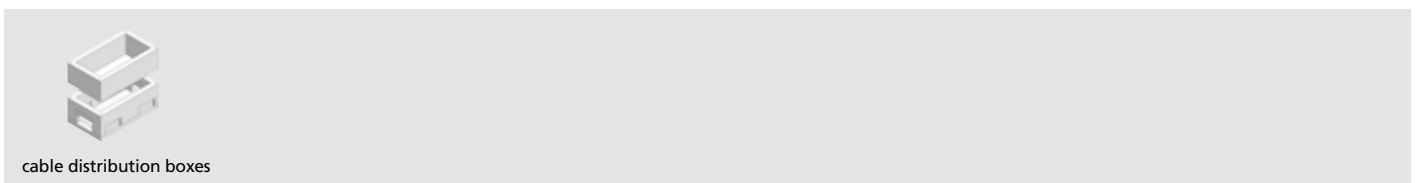
## Products for sewage water treatment and rainwater utilization system



## Products for drainage



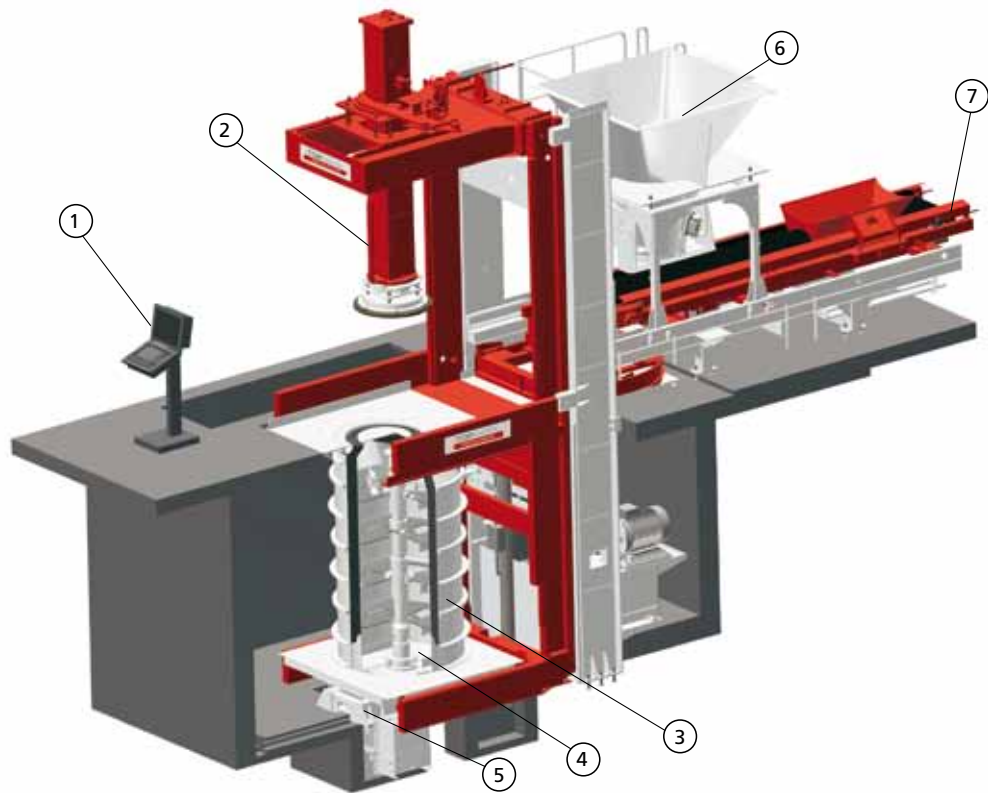
## Products for power supply ducts and telecommunication



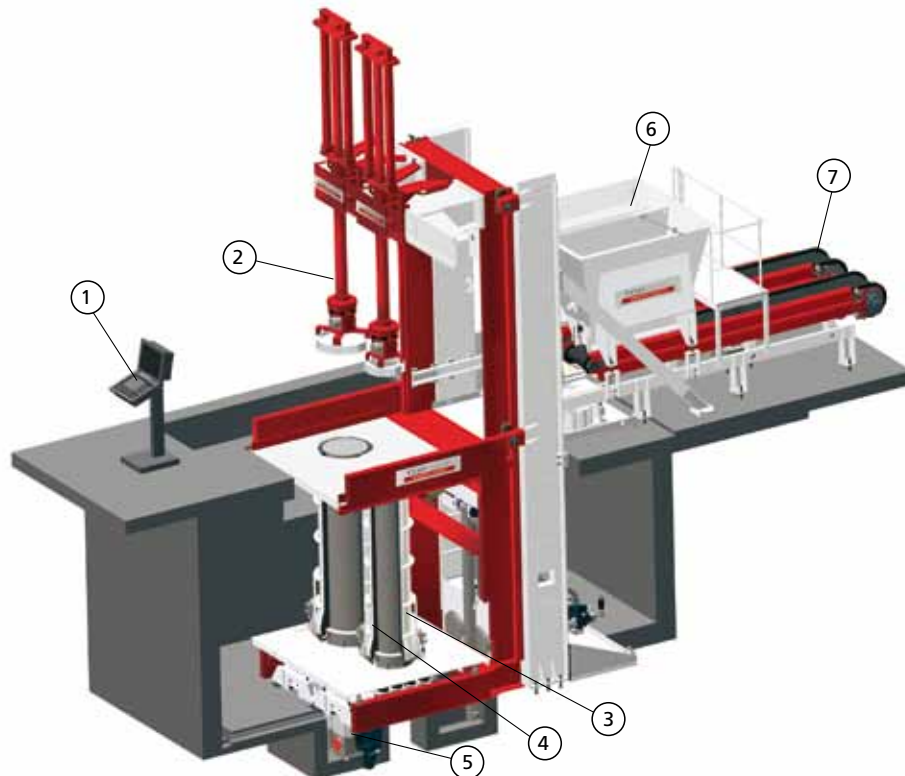
# MISTRAL

## Schematic construction of the MISTRAL

### MISTRAL 150/250 single production



### MISTRAL 150/250 double production



1. Control panel  
2. Press

3. Outer mould  
4. Mould core

5. Central vibrator  
6. Concrete hopper

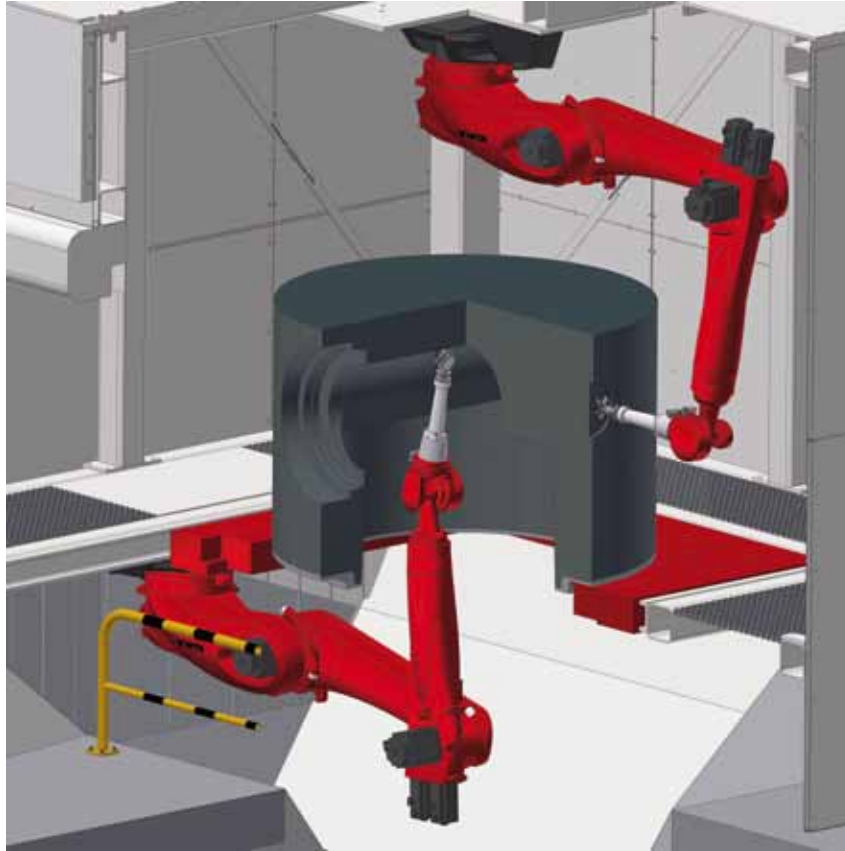
7. Conveyor belt

Photo gallery MISTRAL



# PRIMUSS

## Production of monolithic manhole bases with varying channels



The benchmark **PRIMUSS** innovation integrates the highest level of automation and control technology in the design and manufacture of monolithic manhole bases with bespoke mixed inlet and outlet entries and benching. In using proven robotic programming the varying location, diameter and angular dimensions of different pipe inlets permit precise milling by **PRIMUSS** immediately after product demoulding.

The efficient **PRIMUSS** effectively reduces mould and labour expense associated with mould assembly and demoulding thus eliminating costs and waste connected with polystyrene formers and plastic liners. **PRIMUSS** lowers tooling and energy costs through the milling of fresh concrete.

All monolithic manhole bases produced by **PRIMUSS** are milled from high compacted fine grain concrete. Dimensionally precise bases are formed due to partial curing in the mould. The base units are manufactured using concrete with high strength and low W/C ratio.

All **PRIMUSS** channels (benching) are designed for optimum flow. The operating software produces a quick setup for complex inlet/outlet design improving manufacturing flexibility from information given by the site engineer.

**PRIMUSS** manhole bases set the benchmark standard for best practices in terms of quality, efficiency and production output.

[www.primuss.eu](http://www.primuss.eu)

### Capacity data

Product dimensions max. Ø	600-1.500 mm
Heights max.	250-1.500 mm
Product weight max.	5.000 kg
Cycle times	5-25 min

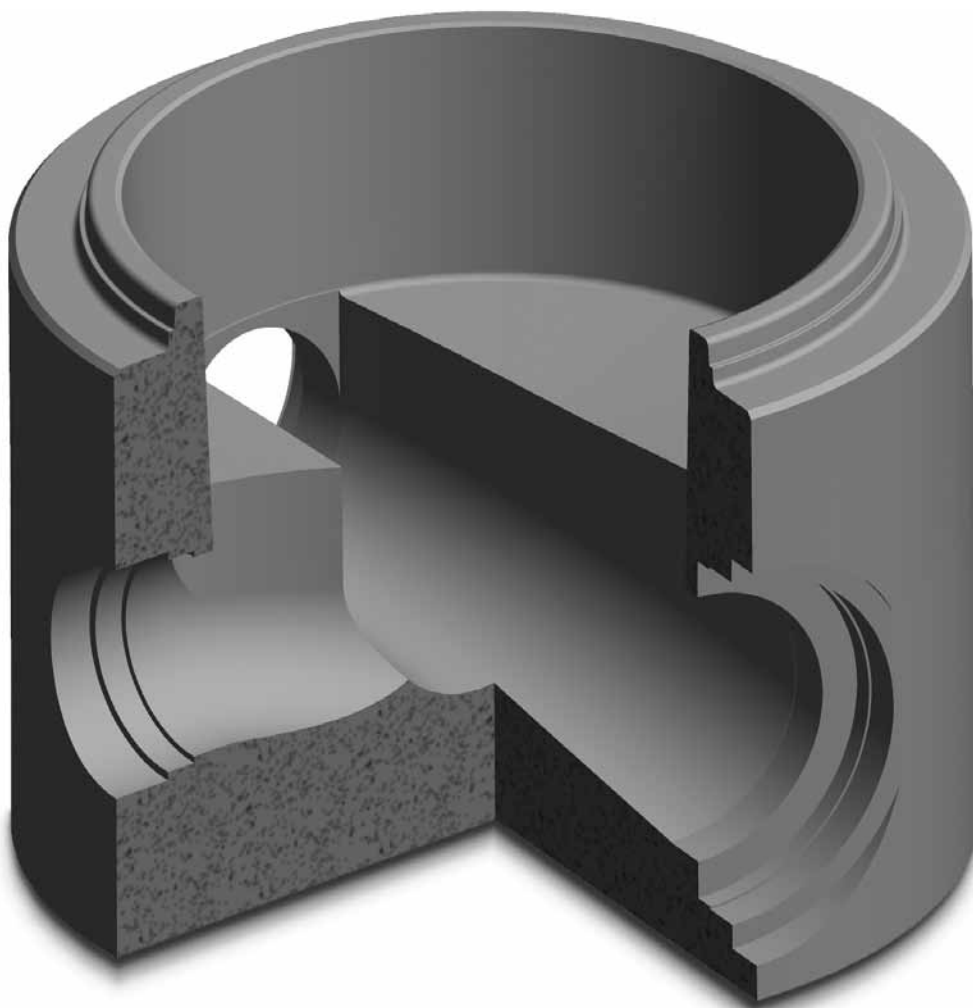
The PRIMUSS is very well suited for the production of  
Products for sewerage



manhole bases



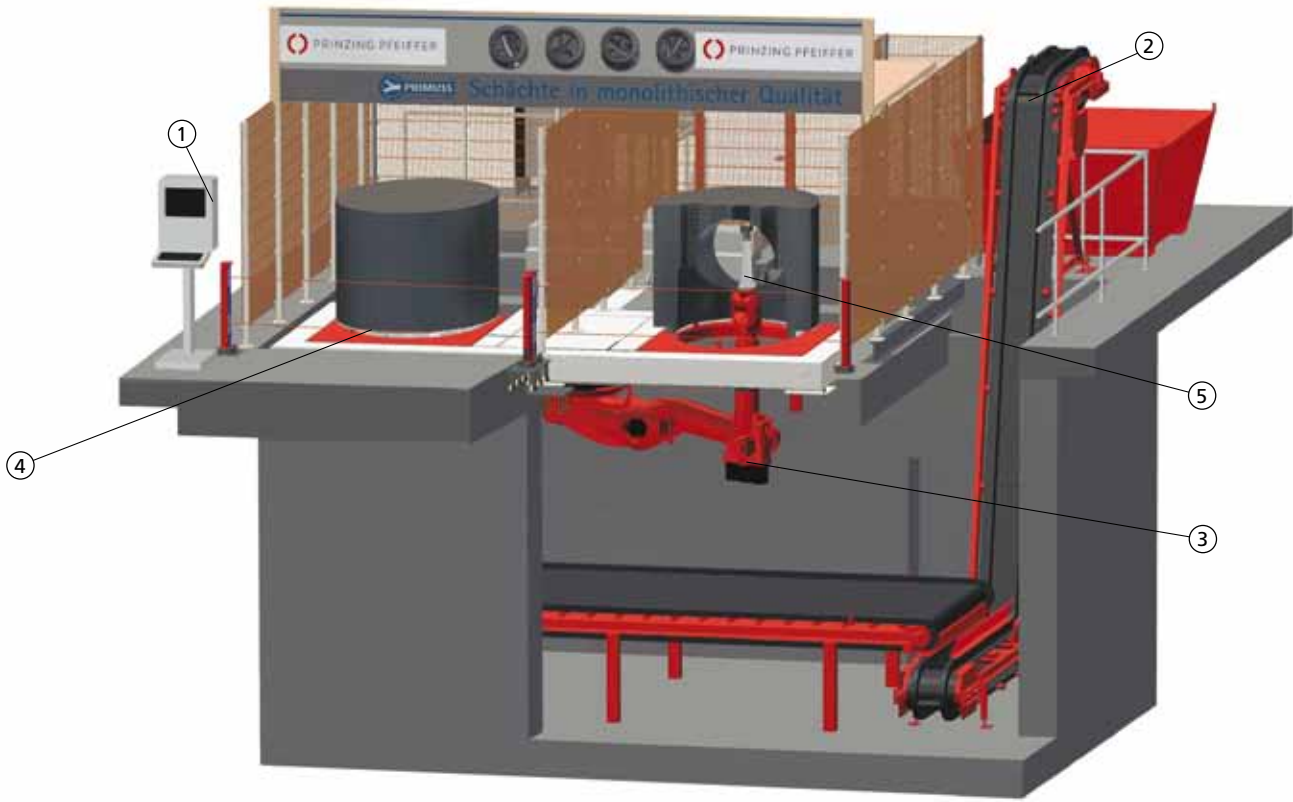
rectangular manhole bases units



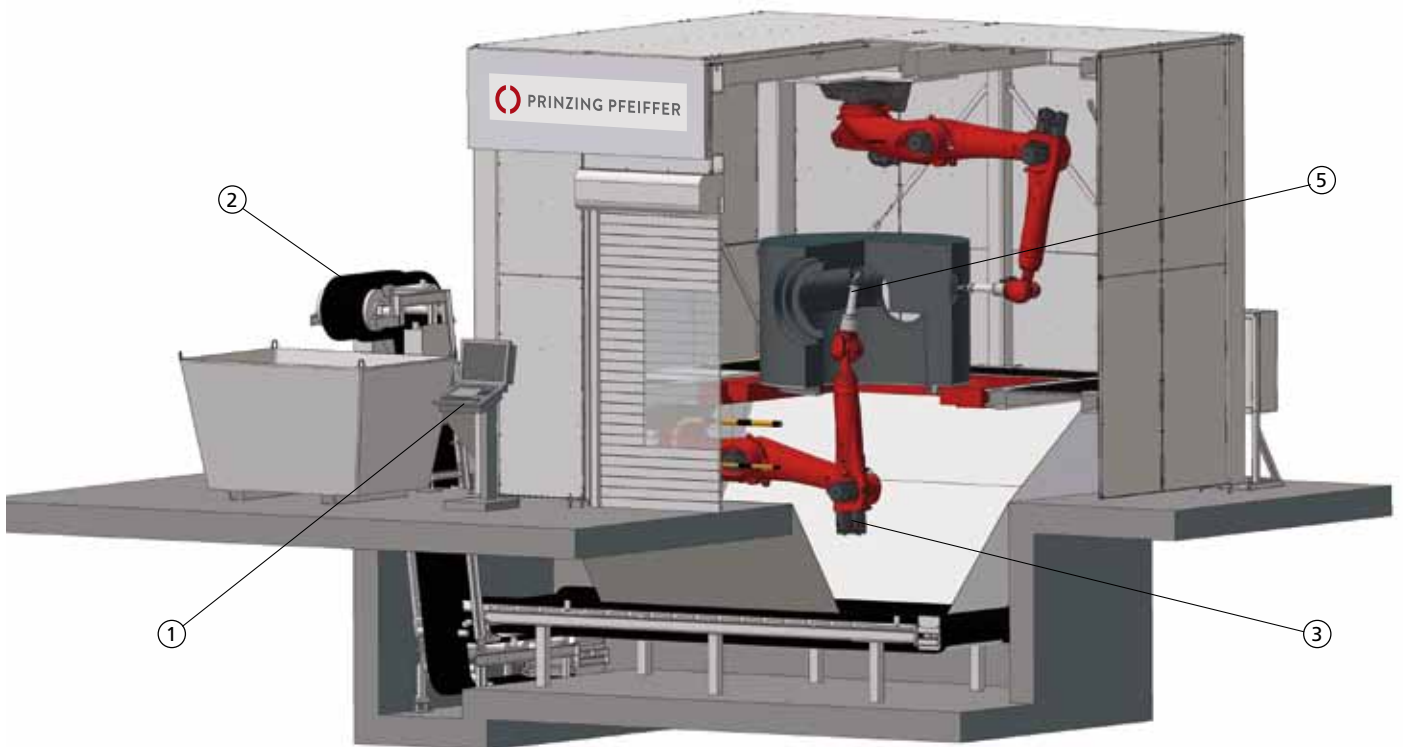
# PRIMUSS

## Schematic construction of the PRIMUSS

### PRIMUSS 125/150



### PRIMUSS 150/150



1. Control panel

2. Conveyor belt for milled material

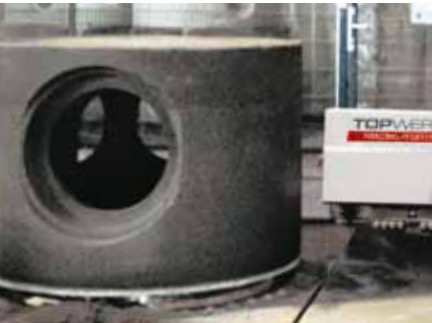
3. Industrial robot

4. Milling station with turntable

5. Cutter



Photo gallery PRIMUSS



# RADIAL PRESS RP

## Fully automatic pipe machine



The **RADIAL PRESS RP** stands for the state of the art technology associated with high performance manufacturing machine systems for concrete pipe production. The counter rotating compaction distributor and pressing head deliver high dimensional precision across a range of concrete pipe having a maximum outside diameter of 2500 mm and a minimum inside diameter of 250 mm. Its ability to produce lengths from 1000 mm to 6000 mm at a fast rate increases by using two outer moulds mounted to a turntable allowing the joint operation of production and demoulding.

The **RADIAL PRESS RP** has a high drive power for producing thick wall doubled reinforced concrete pipe. All constituent parts are designed with high reliability and long life minimal wear in mind. It produces low noise levels thus creating an environment for good and safe working conditions for staff.

This production system delivers a manufacturing excellence for a large range of concrete pipe at a high rate of output unchallenged in the marketplace.

### PRODUCT CAPABILITIES

- Reinforced and Unreinforced Concrete pipes
- Pressure Pipes up to 6 m in length
- Jacking Pipes
- Rocker Pipes

### Capacity data

#### Dimension product

max. outside Ø 2500 mm  
min. inner Ø 250 mm

#### Lengths max.

1000 - 6000 mm

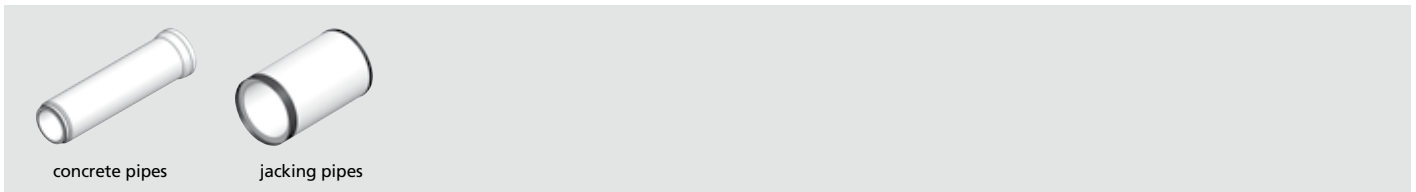
#### Product weight

100 - 10000 kg

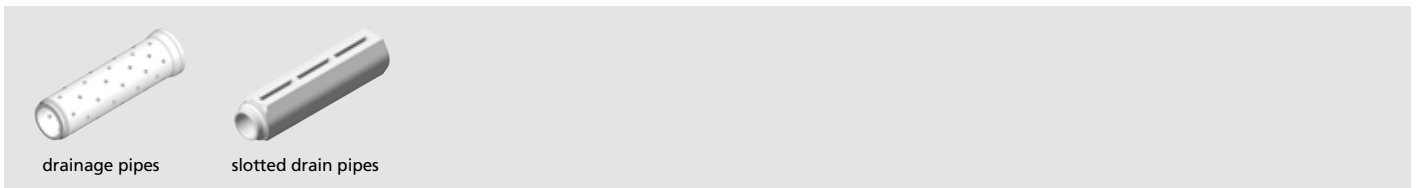
#### Cycle times

1,0 - 4,5 min

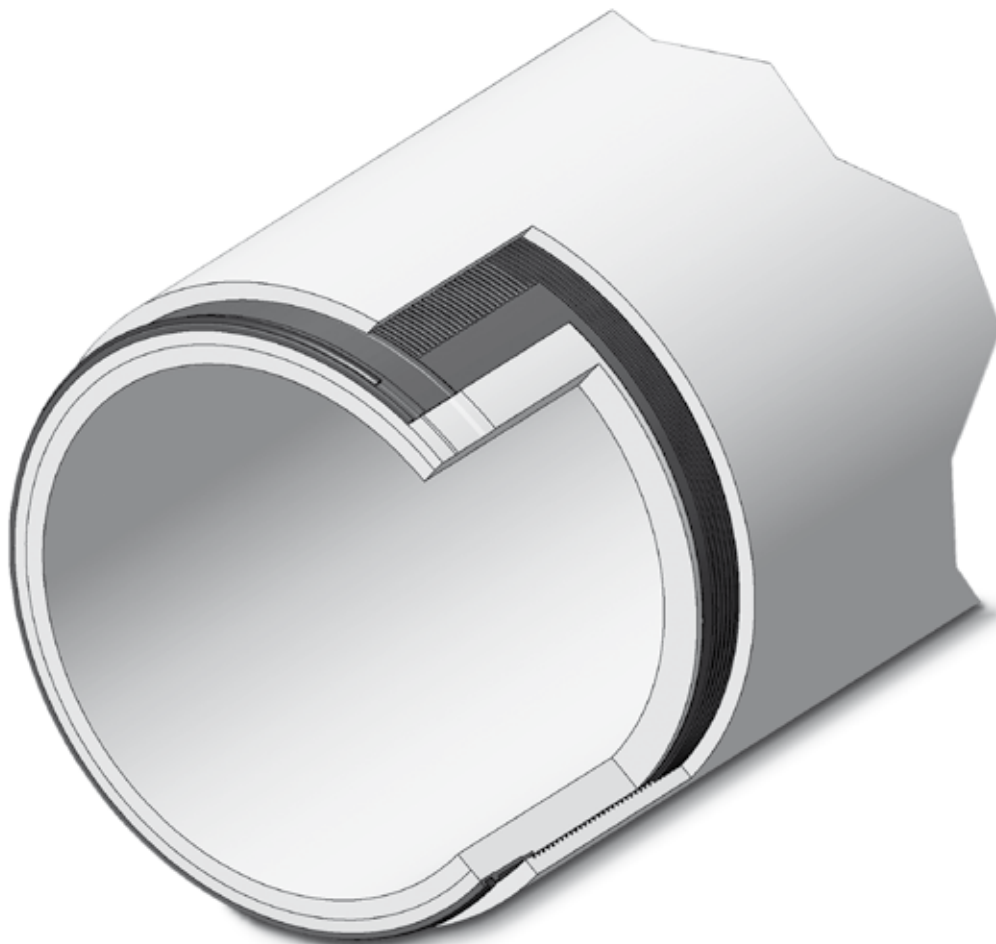
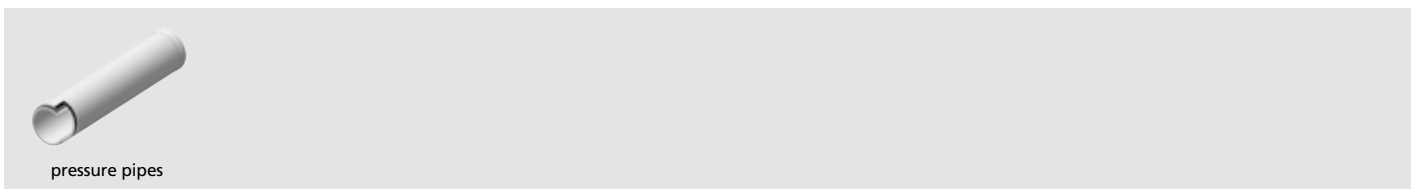
The RADIAL PRESS RP is very well suited for the production of  
Products for sewerage



Products for drainage



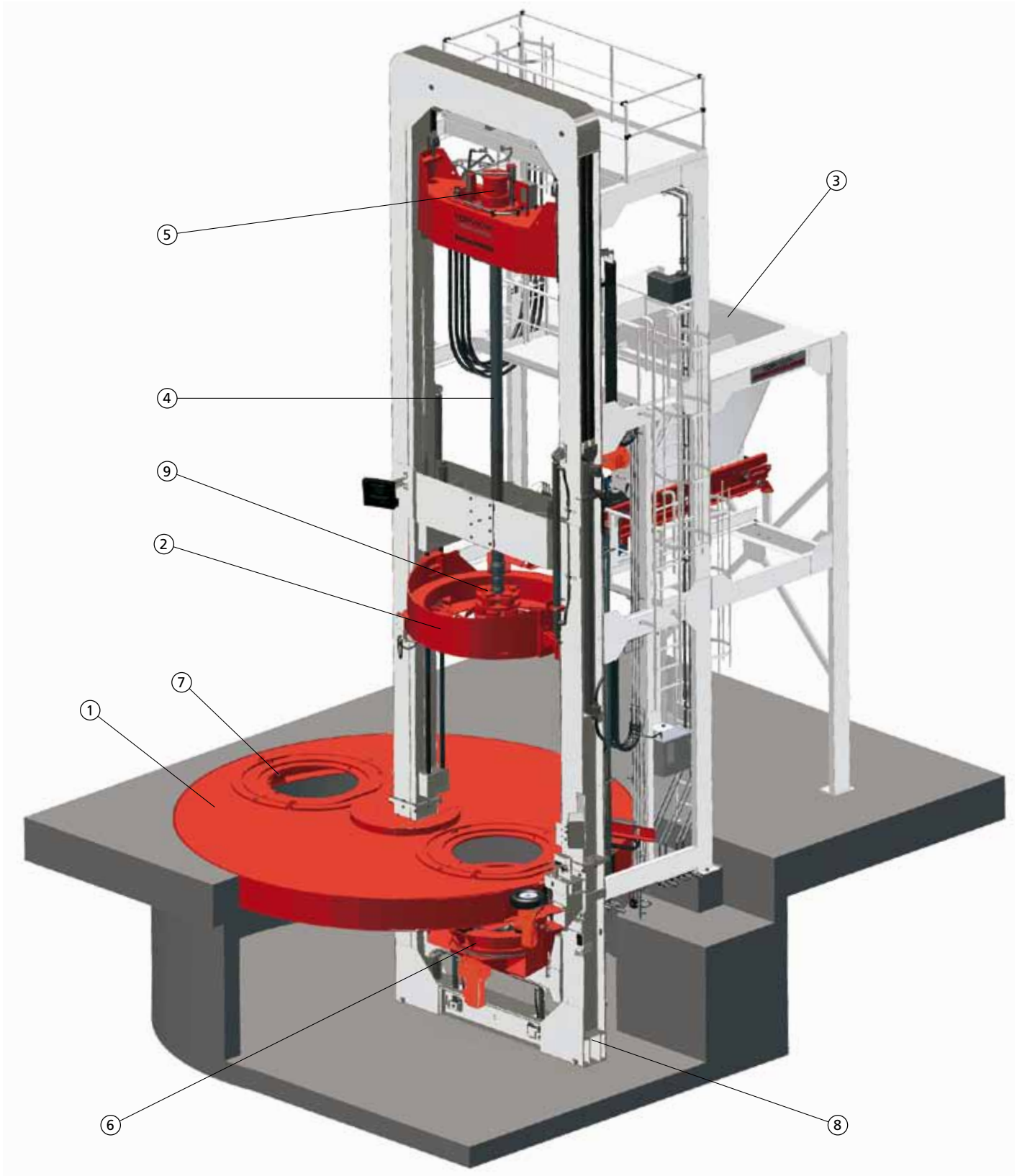
Products for fresh water supply



# RADIAL PRESS RP

Schematic construction of the RADIAL PRESS RP

RADIAL PRESS RP 1625



1. Turn table  
2. Working table

3. Concrete hopper  
4. Main shaft

5. Driving unit  
6. Bell-end compactor

7. Outer mould fixation  
8. Machine main frame

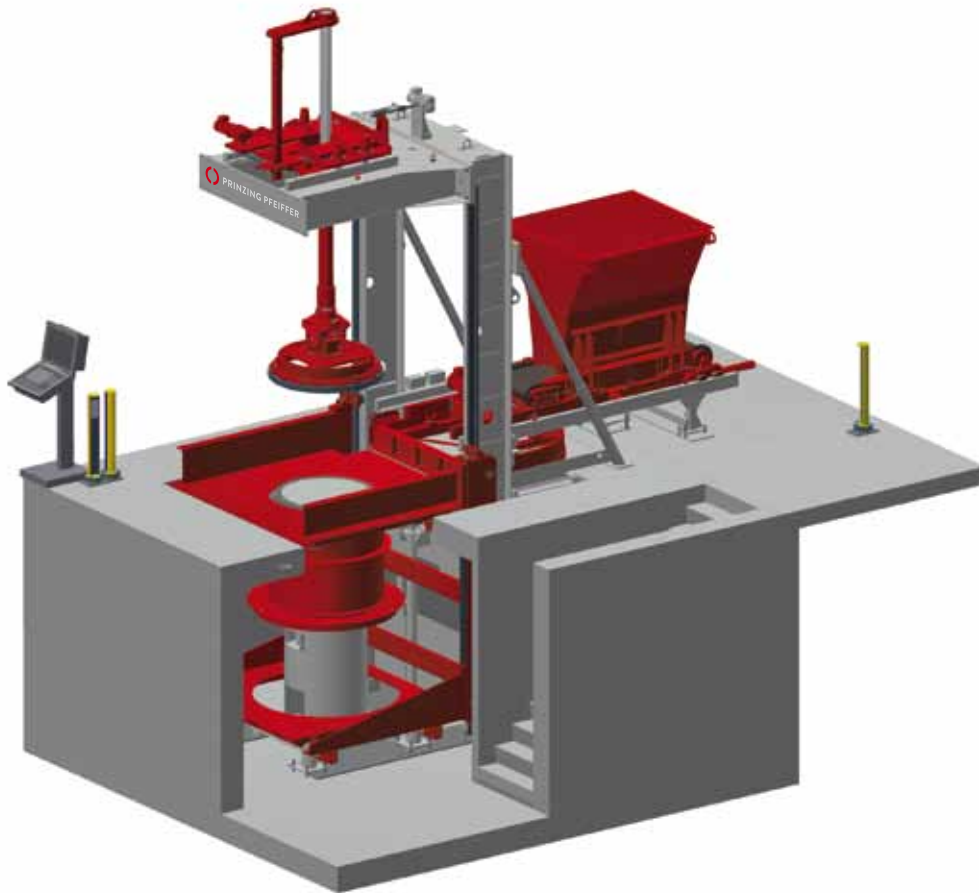
9. Pressing tool

Photo gallery RADIAL PRESS RP



# TORNADO

## Automatic concrete pipe and manhole machine



The **TORNADO** machine is established with a solid reputation as a proven and reliable production system for concrete manholes, pipes and similar products such as street gullies. It offers efficient cycle and product change times for these various product types. The **TORNADO** operating arrangement comprises of four modular components creating a wide range of product flexibility.

Our patented GEBA process ensures the exact length precision of products. Precise forming of concrete pipe and manhole spigots can be achieved through our SYSTEM-OPTIMA method.

The **TORNADO** utilizes a pit installed vibrator unit which reduces noise levels. The setup is accessible from three sides allowing optional handling systems to accommodate various product types (please see page 44 PRINZING-PFEIFFER Handling).

The highly effective central vibrator technology assures excellent product quality and together with tamper vibration providing exact concrete pipe spigots.

The hydraulic mould clamping of outer case and inner core in conjunction with the automatic height adjustment provide efficient versatility at mould changeover.

The **TORNADO** machine can be dedicated either to one type of product or across a scope of products.

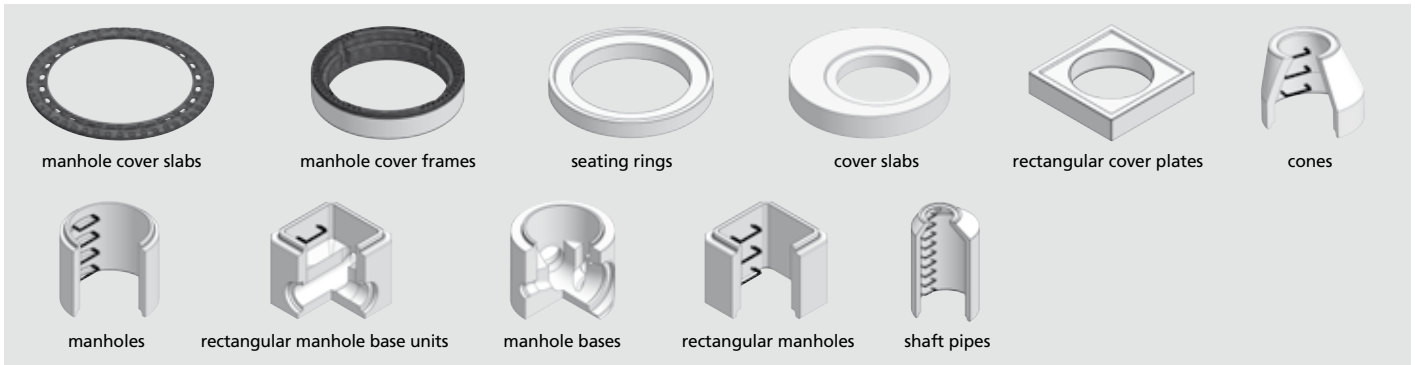
### PRODUCT CAPABILITIES

- Manhole Risers and Cones
- Concrete Pipes
- Manholes, Tanks, Rings & Base Units
- Box Culverts
- Drainage, Sewerage and Building Products

### Capacity data

Product dimensions max. Ø	150 – 2.500 mm
Lengths max.	250 – 1.500 mm
Product weight max.	50 – 6.000 kg
Cycle times	2 – 4,5 min

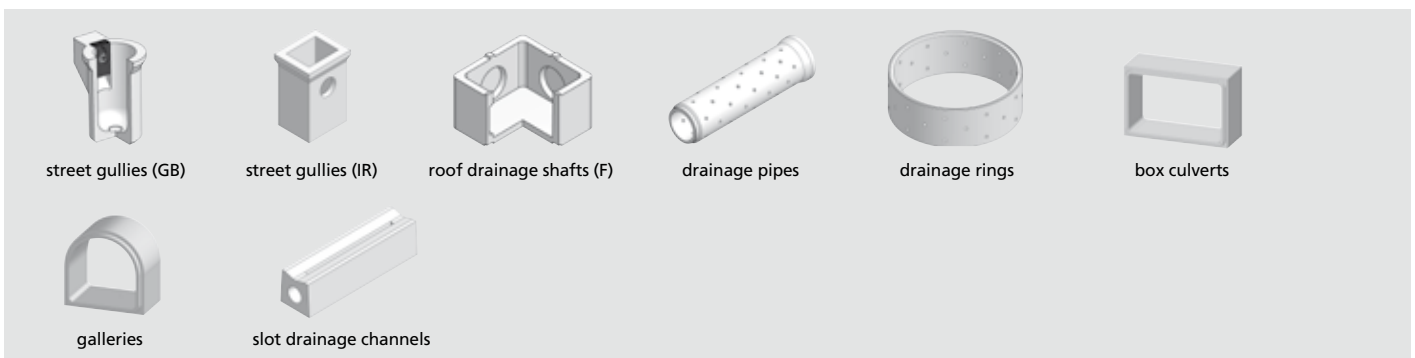
## The TORNADO is very well suited for the production of Products for sewerage



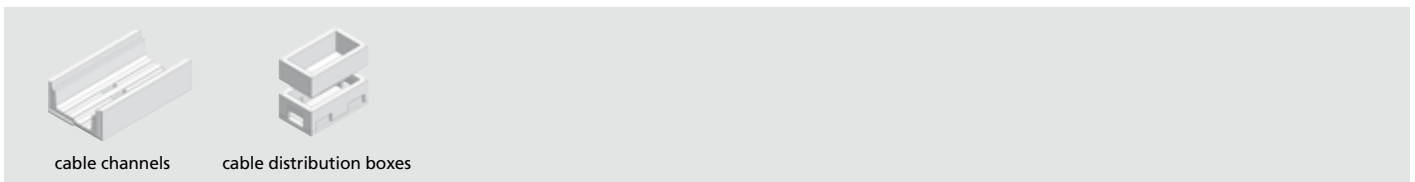
## Products for sewage water treatment and rainwater utilization system



## Products for drainage



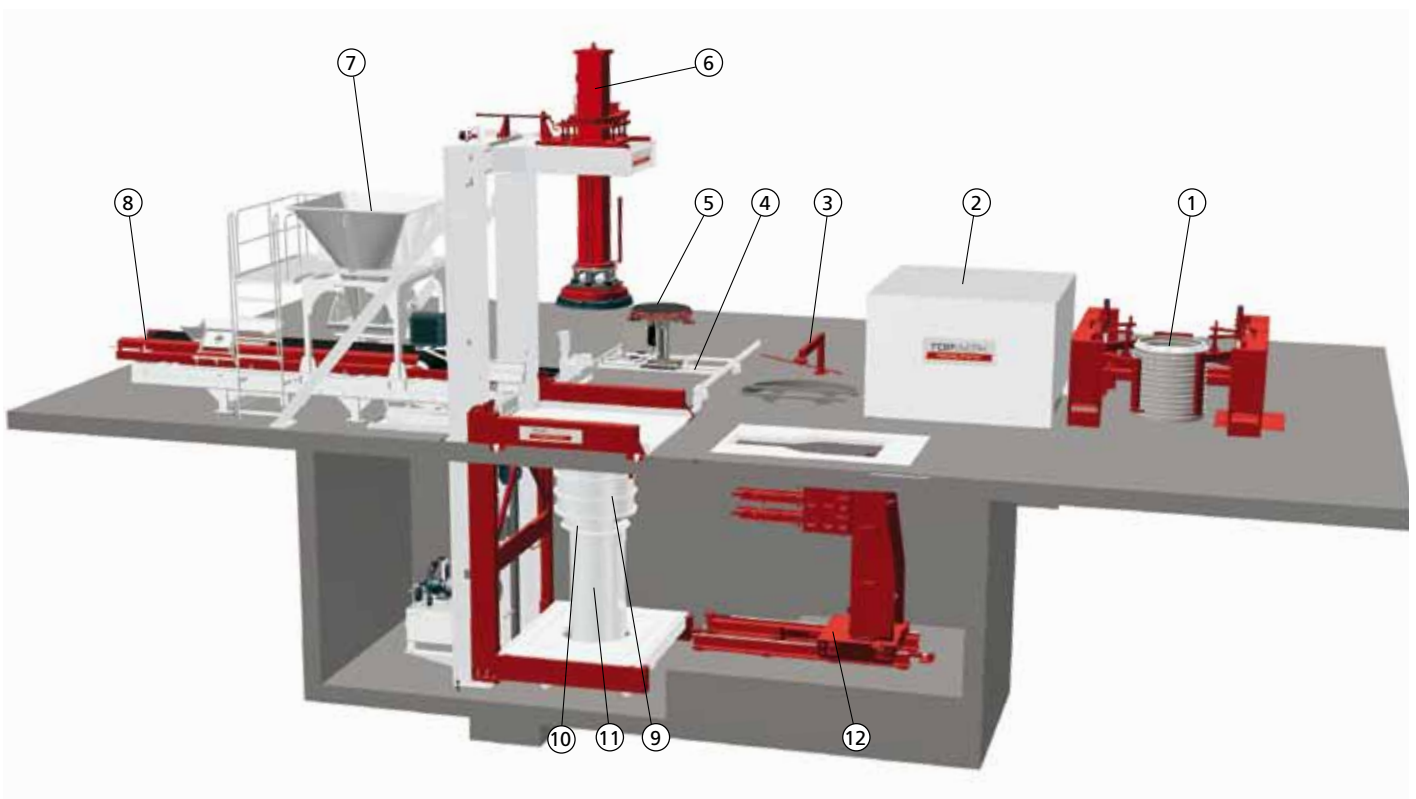
## Products for power supply ducts and telecommunication



# TORNADO

## Schematic construction of the TORNADO

### TORNADO 150/150



- |                    |                   |                    |                    |                |                      |
|--------------------|-------------------|--------------------|--------------------|----------------|----------------------|
| 1. Pallet magazine | 3. Oiling station | 5. Anchor magazine | 7. Concrete hopper | 9. Outer mould | 11. Central vibrator |
| 2. Pallet cleaning | 4. Pallet feed    | 6. Press           | 8. Conveyor belt   | 10. Mould core | 12. Step feeder      |

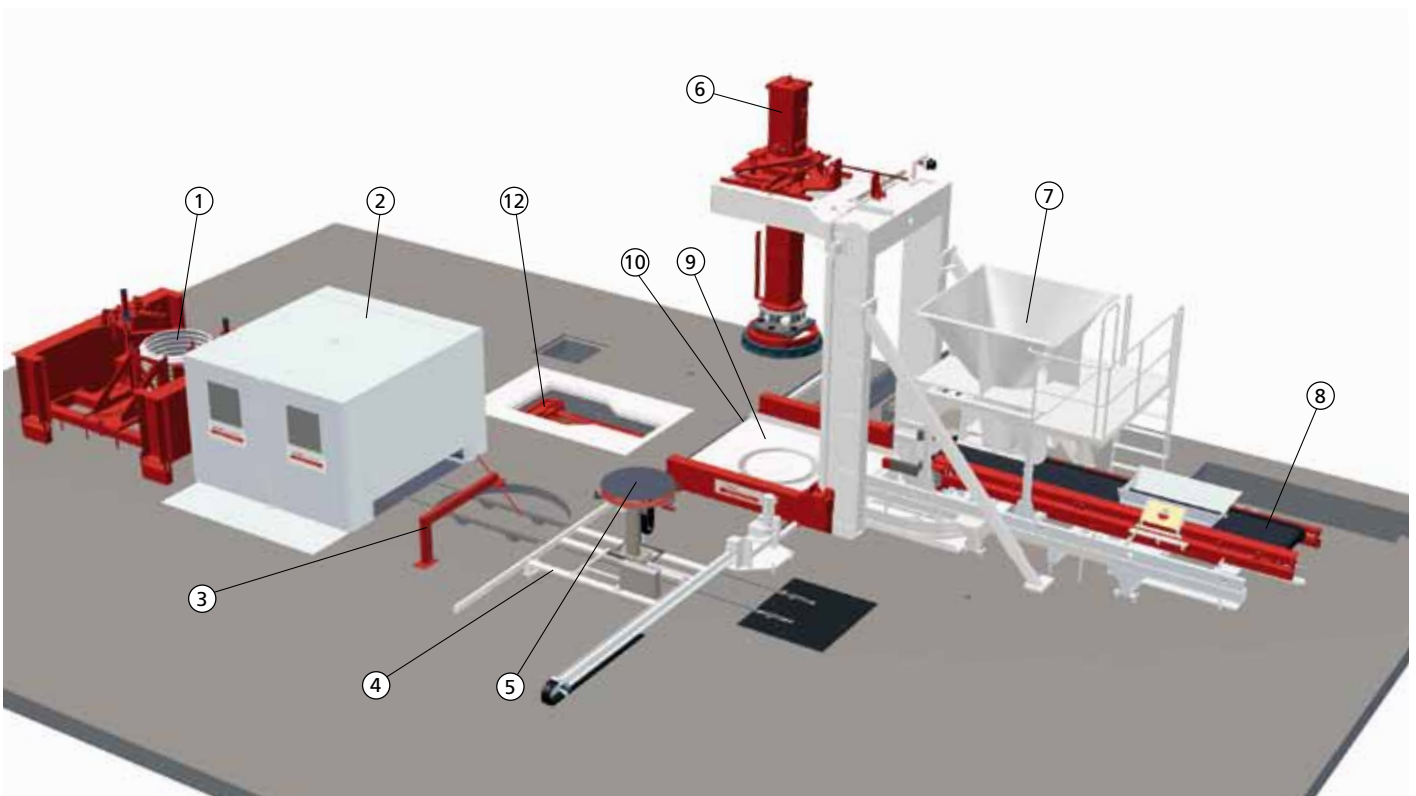


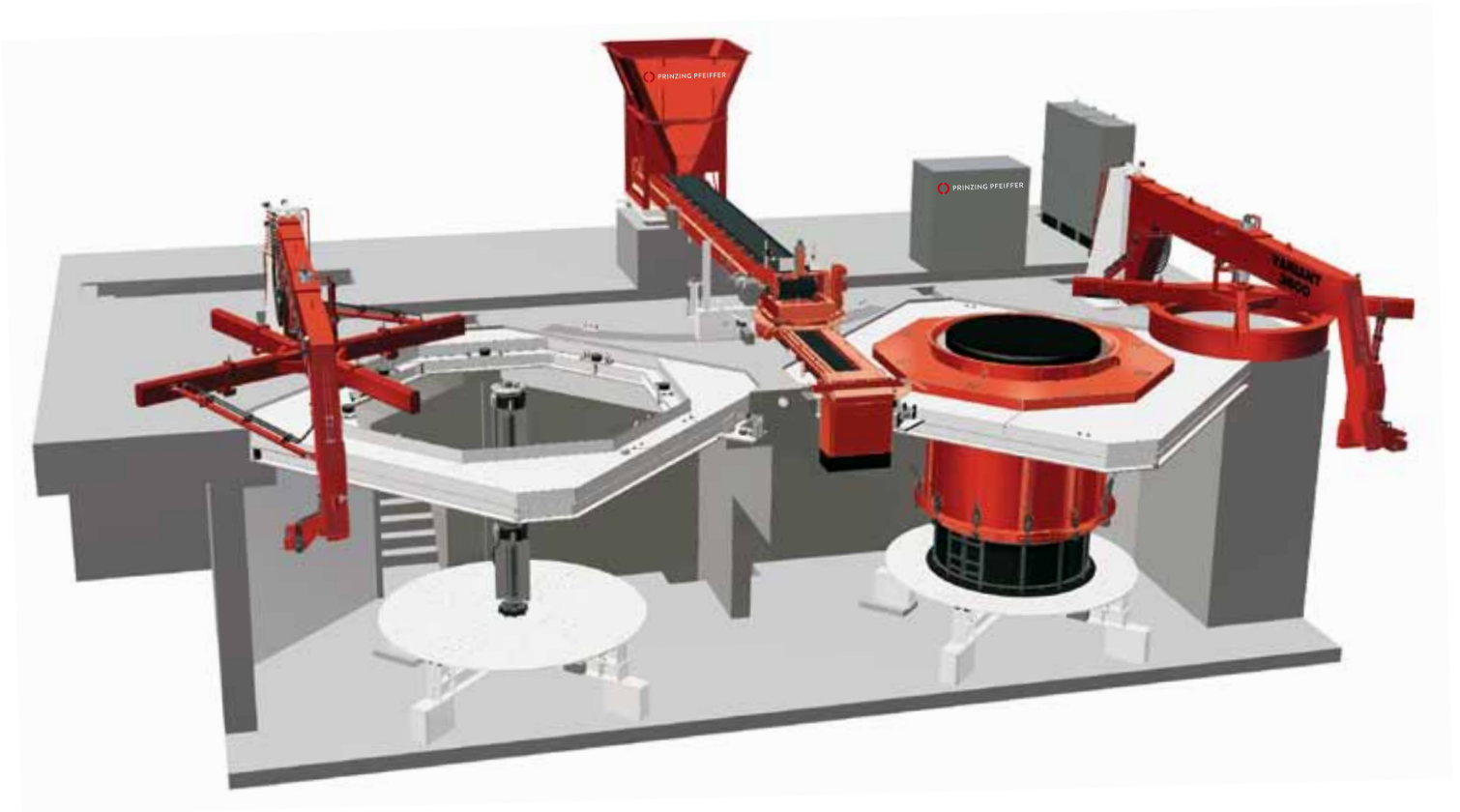


Photo gallery TORNADO



# VARIANT

## Production plant for large sized pipes and box culverts



**VARIANT** production is a high level efficient process for a combination of products that need to be produced in large numbers to meet market demand. The **VARIANT** can be configured with a single station or two for a greater output rate with the flexibility to produce concrete pipe and manhole side by side.

The incorporated vibration and compaction technology is a developed design that is sufficiently powerful enough for large products. The **VARIANT** utilizes a pit installed vibrator unit which reduces noise levels. The easy operated system supports quick mould exchange by hydraulic core clamping with up to five locations.

This manufacturing process improves your production capabilities for large concrete products having high strength and exact specifications.

### PRODUCT CAPABILITIES

- Concrete Pipes
- Box Culverts
- Jacking Pipes
- Pipes with PVC or HDPE Lining
- Oval and Arch Pipes

### Capacity data

#### Product dimensions

max. outer Ø 6.000 mm  
min. inner Ø 250 mm

#### Lengths

250 – 5000 mm

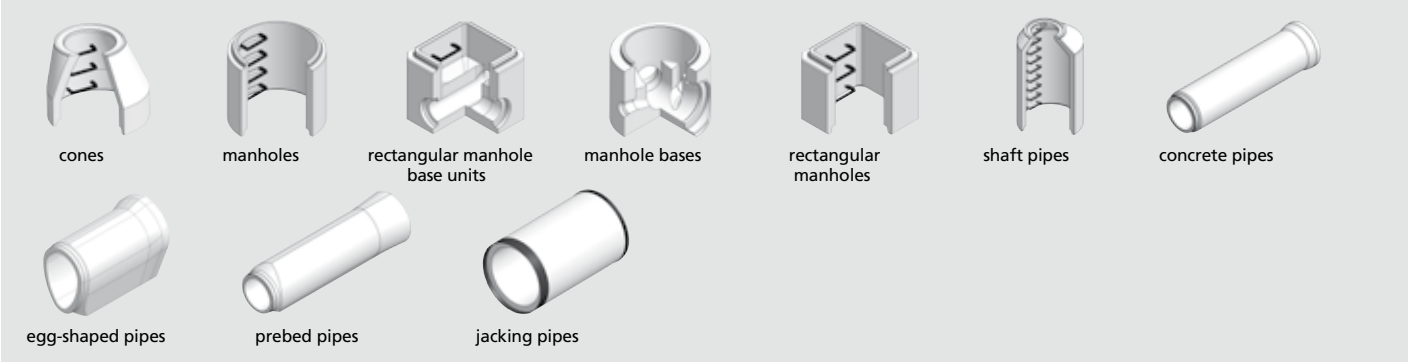
#### Product weight max.

30 t

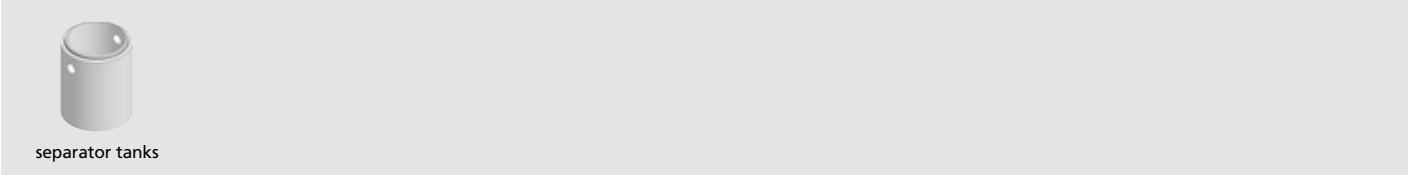
#### Cycle times:

3 – 25 min

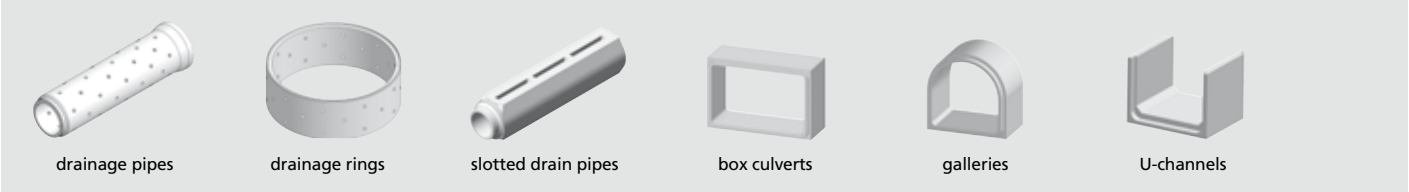
# The VARIANT is very well suited for the production of Products for sewerage



# Products for sewage water treatment and rainwater utilization



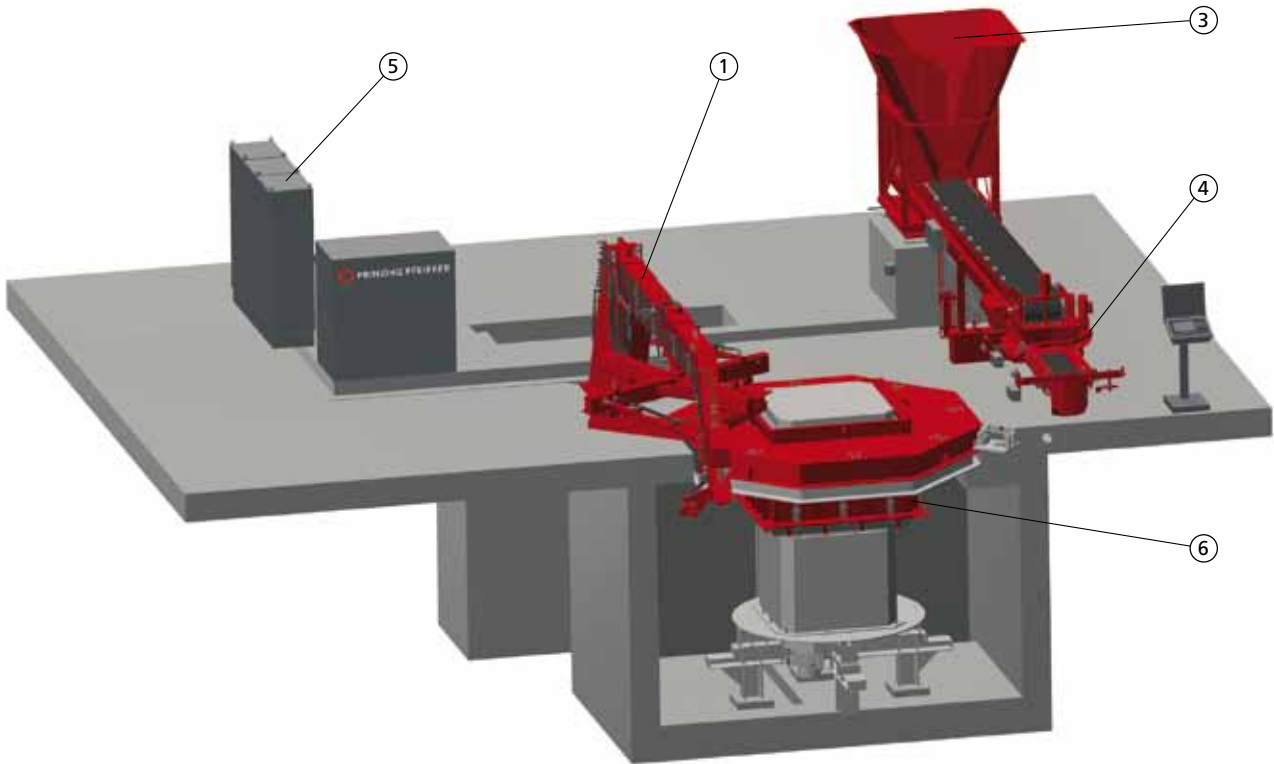
# Products for drainage



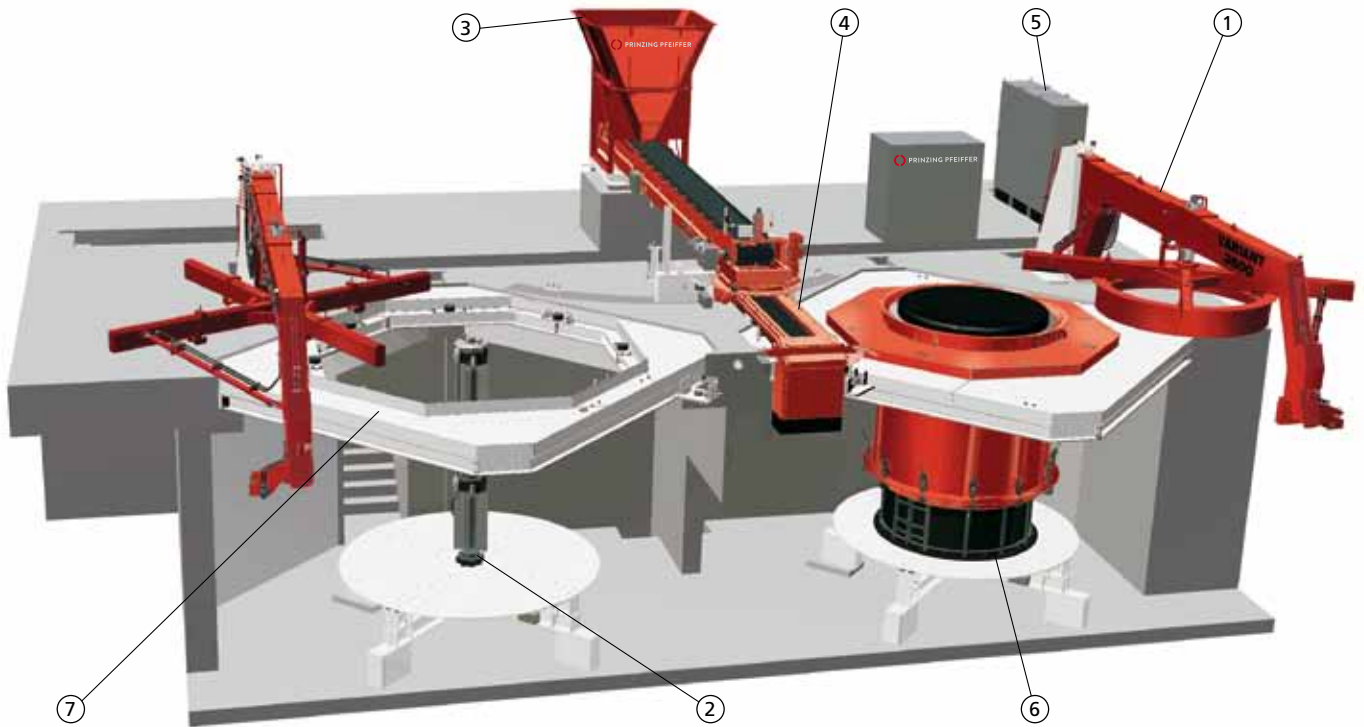
# VARIANT

## Schematic construction of the VARIANT

### VARIANT 2500 E



### VARIANT 3600 D



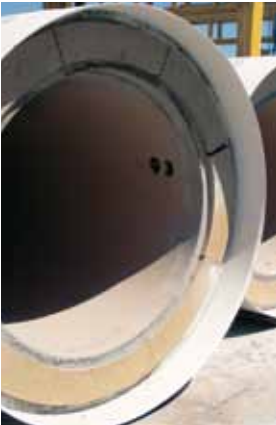
1. Pivoting press  
2. Central vibrator

3. Feeding unit  
4. Gap feeding unit

5. Control box  
6. Mould equipment

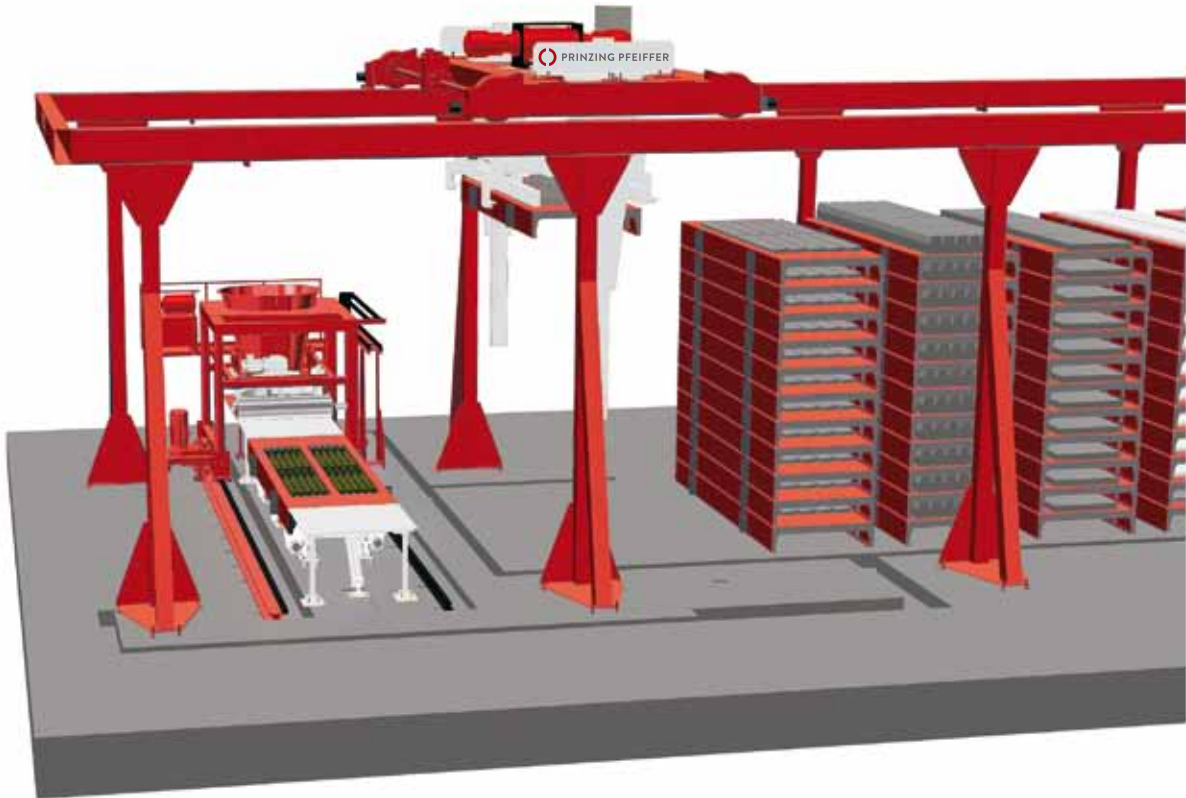
7. Mould fixation frame

Photo gallery VARIANT



# ZELUS

## Automatic production line for a wide range of concrete products



The production system **ZELUS** is fully automated having a high degree of efficiency allowing a closed cycle carousel for a wide range of precast and wet cast products. A crane robot manages the automated handling of up to 130 battery style moulds to racking in an 8 hour working period, then subsequently acting as a demoulding tool. This circular system delivers high quality and a greater output of a range of products previously limited to inefficient static moulds.

**ZELUS** has the capability and capacity to produce a wide range of oblique product shapes up to 1 m high x 3 m width x 6 m length with a weight reaching to 5000 kg.

This highly efficient line has an exact dosing system for the precise filling of individual moulds mounted within carrier frames which act as transport pallets to convey newly made product to a curing rack. An alternative SCC (self compacting concrete) dosing method can also be implemented. A filling depth tolerance of +/- 1 mm is maintained on the finished product.

### Product Capabilities:

- Sills
- Slabs
- Covers
- Road barriers
- U-Channels
- Cellar wing walls
- Cattle slats
- Retaining walls

### Capacity data

Product dimensions max.

6.000 x 3.000 x 1.200 mm

Lengths max.

6.000 mm

Product weight max.

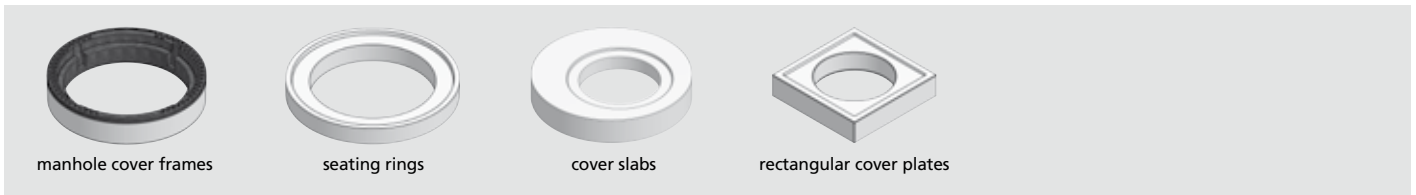
1 - 5000 kg

Cycle times

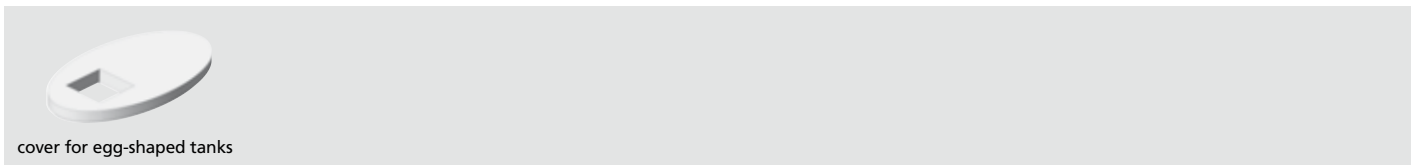
3 - 5 min

## The ZELUS is very well suited for the production of

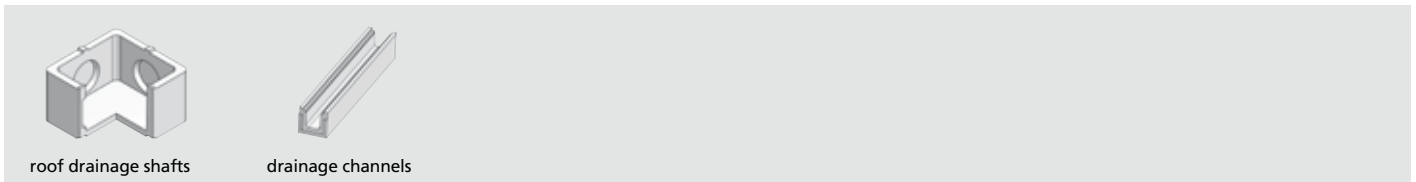
### Products for sewerage



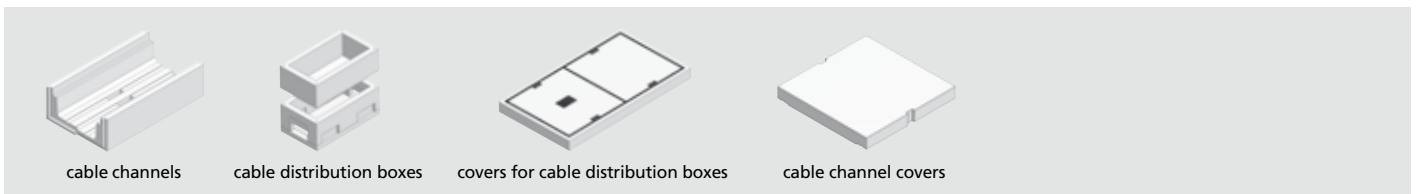
### Products for sewage water treatment and rainwater utilization system



### Products for drainage



### Products for power supply ducts and telecommunication



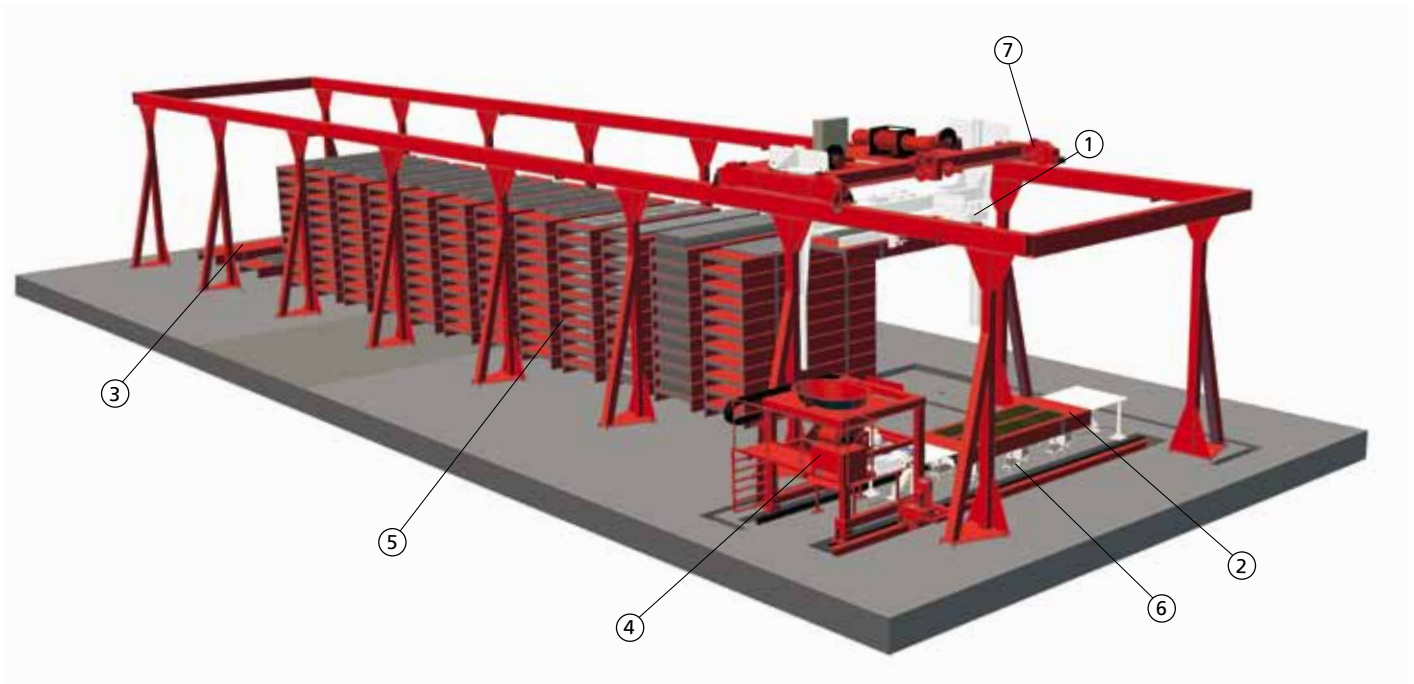
### Other concrete products



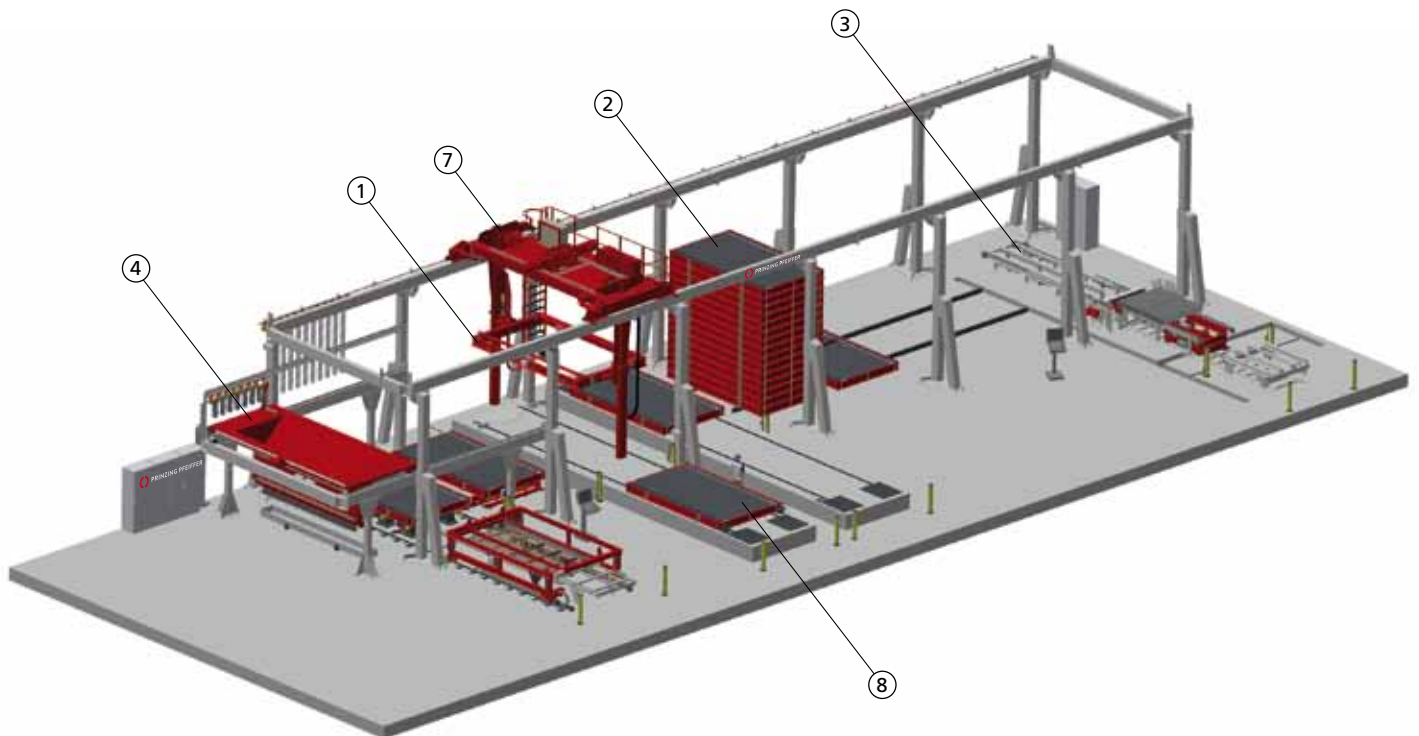
# ZELUS

## Schematic construction of the ZELUS

### ZELUS 400/25 – dry-cast



### ZELUS 500/20 – wet-cast



1. Mould turning device  
2. Mould equipment

3. Demoulding position  
4. Feeding unit

5. Pallet stack  
6. Vertical vibrator

7. Portal robot  
8. Preparing station



Photo gallery ZELUS



# Accessories

## Moulds and formworks



Since over 100 years, PRINZING-PFEIFFER develops, constructs and builds concrete moulds and formworks for the production of all kinds of precast concrete elements for wet-cast und dry-cast process with zero-slump concrete mixes.

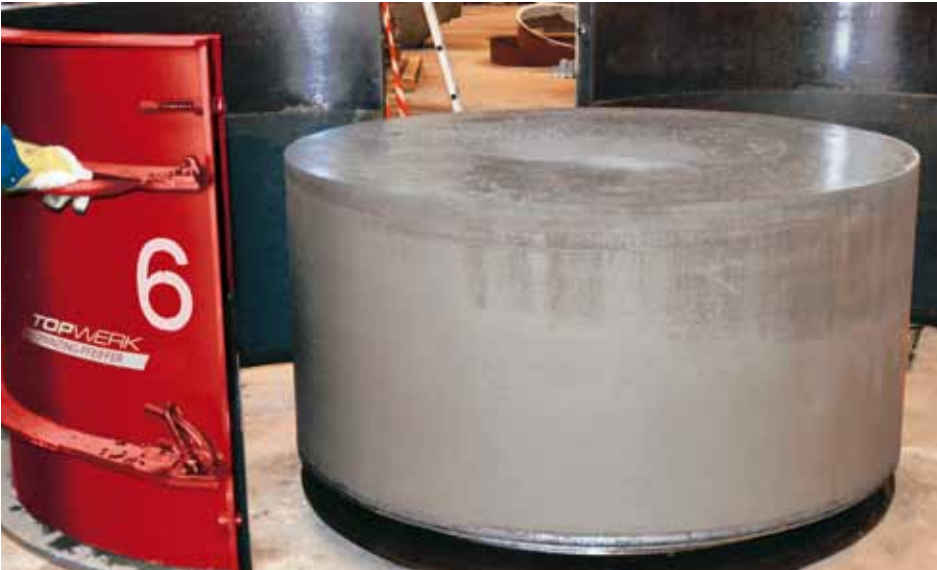
Using the wet-cast process for different products wet-cast moulds are filled with fluid concrete mixes (in comparison to the Vibro-Compaction and Pressing Process where zero-slump concrete mixes are used) and afterwards compacted with vibrators or vibration tables. The use of self-compacting concrete (SCC) also eliminates the need for compaction.

Our staff in our mould making workshop and the long-standing experience of our employees guarantee an optimal design of the moulds for the product being produced. By the use of 3D engineering all moulds are registered on an order-related basis. Consulting and service are therefore available even after many years. Also for machines from other manufacturers we design and build mould equipment with consideration of specific characteristics of the third-party product.

PRINZING-PFEIFFER also delivers automated wet-cast systems (e.g. ZELUS) as well as handling equipment as lifting harnesses and turning devices for the transport and turning of the moulds.

Excellent quality of the concrete products with high service life of the mould equipment are our claims.

Photo gallery moulds and formworks



# Accessories

## Handling Systems, Pipe and Manhole Processing Machinery



PRINZING-PFEIFFER offers modularly built and optionally extendable **handling systems** for an automatic production process. These handling components can be used as a stand-alone solution (e.g. base pallet cleaning, pipe testing equipment, etc.) or fully integrated in complete production lines. New machinery as well as existing machinery can be extended as follows

- Base pallet handling
- Feeding devices  
(e.g. steps, transport anchors)
- Mould handling
- Product handling
- Product testing equipment
- Marking stations

For specific requirements, we offer special finishing systems for precast concrete products, manufactured with our production machinery. So customer-specific requests can be realized with our concrete pipe saws, milling machines and drilling centers. This equipment can be used as stand-alone machines or can be integrated in production lines.

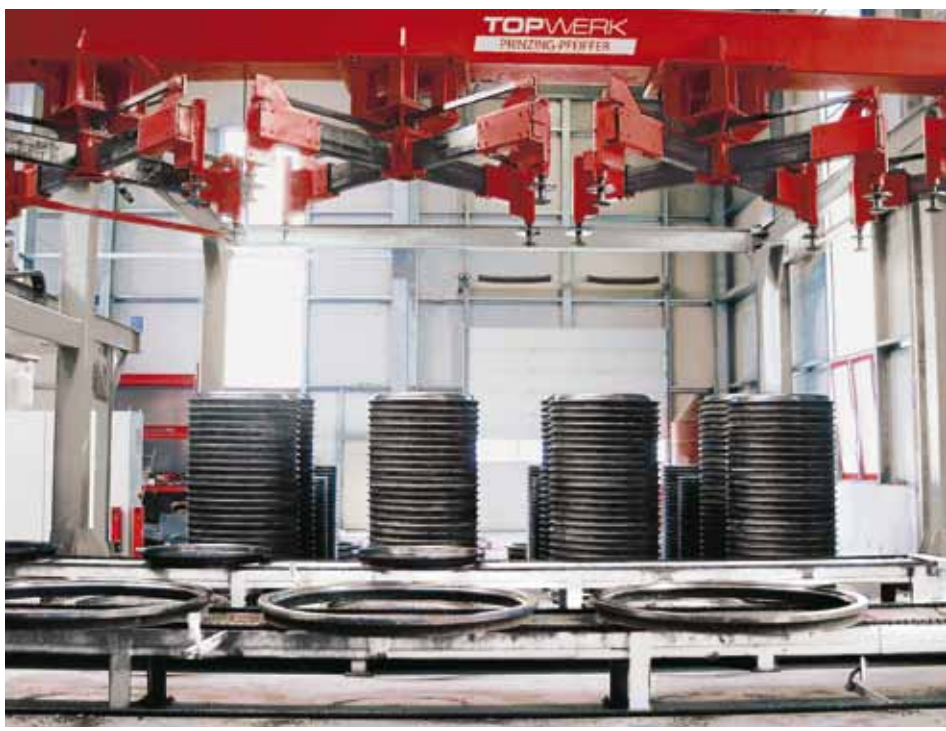
**Pipe and Manhole Processing Machines** for reinforced and non reinforced concrete products:

- **Sawing** of straight and beveled cuts with contour controls
- **Milling** of spigot ends, end faces, chamfers and grooves at pipe ends
- **Drilling** of connections on pipes and manholes

### Advantages

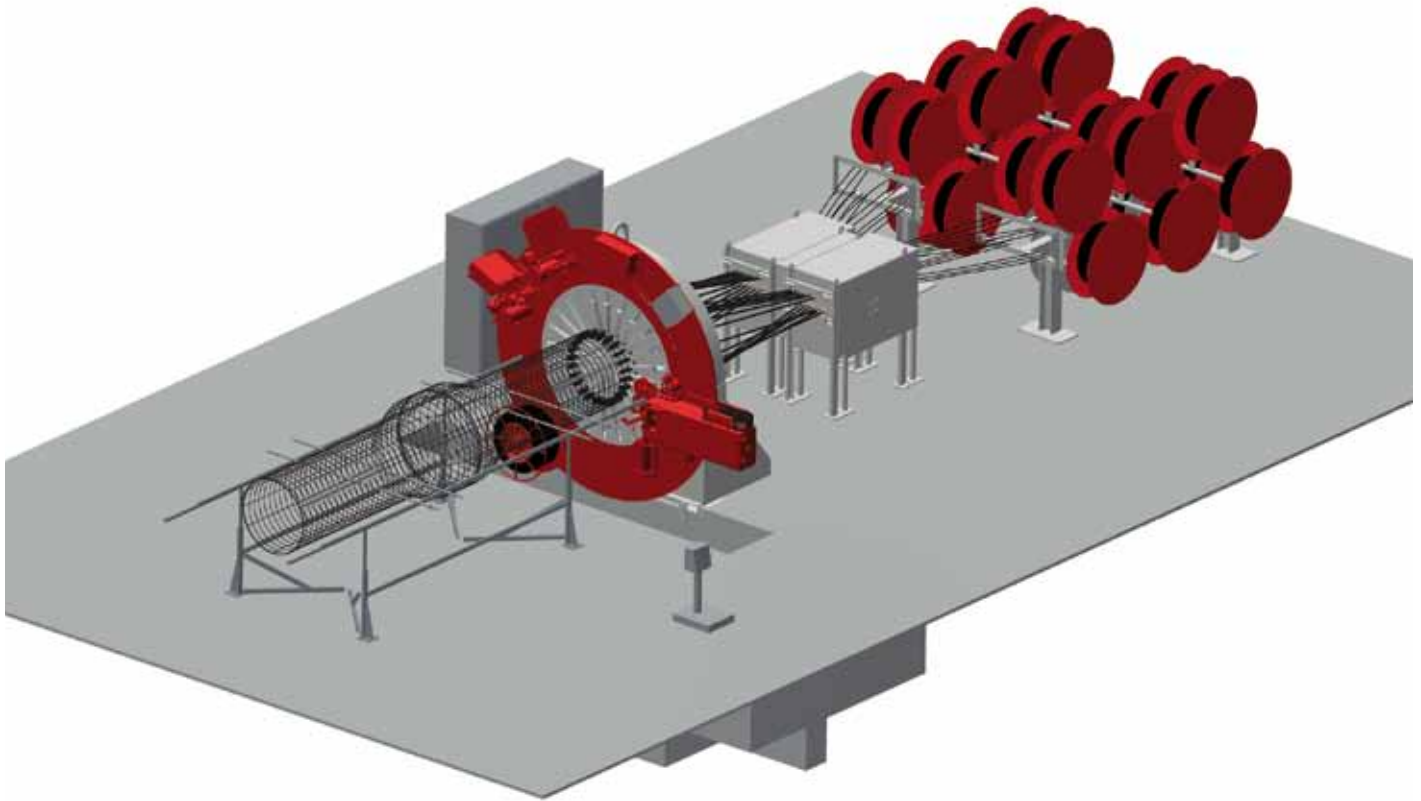
- Modularly designed and optionally extendable
- Universally usable for different machine types
- Use of high-quality automatization components
- Logically thought-out operation plan
- Increase in productivity
- Increase of quality
- Reduction of personnel
- Improvement of working conditions

Photo gallery handling systems



# Accessories

## Cage Welding Machinery



Our cage welding machines are world-wide successful on the market for decades. We are a leading manufacturer of fully automatic cage welding machines for the production of reinforced-concrete pipes.

These are high performance welding machines for the efficient and reliable production of reinforcement cages and hoops in resistance spot welding process. According to the requirements of capacity, product or production line of the precast elements, we offer our customers the best adapted cage welding machine.

### ASMS

Fully automatic cage welding machine with wire feed exclusively from coil. The continuous and uninterrupted cage production resulting in a considerably higher output than conventional cage welding machinery.

### RER (round-elliptical-round)

For the rapid, reliable production of cages with circular bell/spigot and elliptical cross-sections, allowing the use of a single cage even in large diameter pipes – in complete compliance with norms. The automated wire feed (AWF) executes just-in-time the feed of longitudinal wires of different lengths into the cage welding machine.

### SMS

Conventional semi-automatic cage welding machine using pre-cut longitudinal bars. Designed for the production of circular and non-circular cages in variable lengths for pipes with and without bell. Extendable with AWF, automatic shear, cage removal robot, etc.

### HWM

Fully automatic forming and welding machinery for the production of resistance spot welded hoops for manholes.

## Capacity data

Dimension of product

max. outside Ø 5.000 mm

min. inner Ø 340 mm

Quantity longitudinal wires

6 / 9 / 12 / 18 / 24 / 36 / 48

Winding wire

Ø 5 - 12 mm

Longitudinal wire

Ø 5 - 12 mm

Cycle times

1 - 20 min

Photo gallery Cage Welding Machinery



# Accessories

## Compulsory concrete mixer



### Separate drives for perfect mixing results in a short time

The TOPWERK-Mixers of the SM series provide the perfect solution for making concrete types used in the production of paving blocks, kerbstones, hollow blocks, plates, and pipes and manholes as well as precast concrete elements. The production of self compacting concrete is also possible. The reliable planetary mixers are characterized by their high mixing intensity and are used by many customers around the world for many years. The new generation has been further developed and improved.

The separate main drive is realized by one or more gear motors in combination with a ball bearing. The diameter of this ball bearing is depending on the mixer size and is 60 to 90% of the mixer diameter. This results in an extremely rigid drive and there is almost no vertical movement of the mixing tools. This is especially important for fast and clean discharge. The separately driven mixing tools are mounted on the tool carrier within the ball bearing.

The overlying rotational movement of the main drive and star drive results in an elliptical motion, in which the mixing paddles slip over all areas of the mixer bottom and thereby provides a good mixing. With the separate drive it is possible to start the mixing tools under load one after the other and then the main drive. On request, all drives can be equipped with speed controls. Thereby the mixing stars can be adjusted relatively to each other and to the main drive and be adapted to the mixtures. Through different speeds the pollution of the mixing tools can be reduced.

All this is not possible for mixers with central drive.

To improve the mixing results it is possible to add water or cement in the lower area of the mixing trough directly in the mixture, if requested. Water is filled in by lateral water inlets, thereby the mixing tools and the upper part of the mixing trough remains dry and there is significantly less caking. The cement is dosed and slowly added by a speed controlled screw to prevent cement lumps.

The addition of cement directly into the mixture reduces the cement dust deposits in the upper part of the mixing trough considerably. There is much less pollution in the subsequent mixture and the cleaning effort is reduced.

The frame of the mixer is designed to be self-supporting with lower and upper frame and provides thereby also for the torsional rigidity. In particular, this framework allows the installation of two large double doors, making cleaning and maintenance easier and the safety of personnel is significantly increased. The framework allows the installation of a flat slide with two large discharge openings.



Photo gallery compulsory concrete mixer



# History of PRINZING-PFEIFFER

## Prinzing 1862



Tradition and progress have a long history at PRINZING. PRINZING was founded in 1862 by the master blacksmith Georg Prinzing. Obviously in those years there was no need for equipment for precast concrete parts. But at this time the founder's aim was to supply craftsmen and farmers with forged hardware of all kinds.

From the beginning PRINZING was an innovative and forward-looking company. Pressing and forging machinery was driven by using water power. PRINZING was also the pioneer in producing electricity for the local village Weiler. The progression from the craftsman's establishment to an ultra-modern and innovative producer of machinery was always influenced by developments and PRINZING being flexible responds always very quickly to market needs.

From about 1907 PRINZING specialized in the production of equipment for newly developed precast concrete parts. Simple wet-cast moulds were built to produce bricks, kerbstones and concrete pipes. Thousand of such moulds were produced and sold in Germany and abroad.

With the introduction of vibration technology, in which PRINZING was pioneering involved, the production of precast concrete parts could be rationalized. This was also the starting signal for the industrial production of precast concrete parts in large quantities of much good quality.

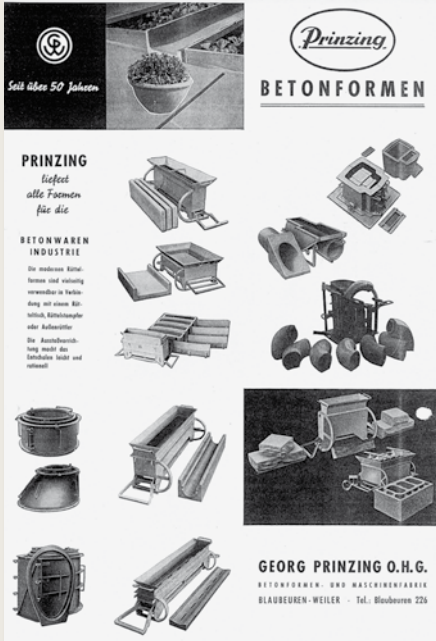
One of PRINZING's developments, the patented central vibrator, resulted in the worldwide export of machines for the production of pipes and cable stones in the 50's. At this time the first manhole machine was developed, which was chain driven and electrically operated.

By 1970 it was possible to increase the output of the manhole machines and the quality of the products considerably, due to the introduction of hydraulics.

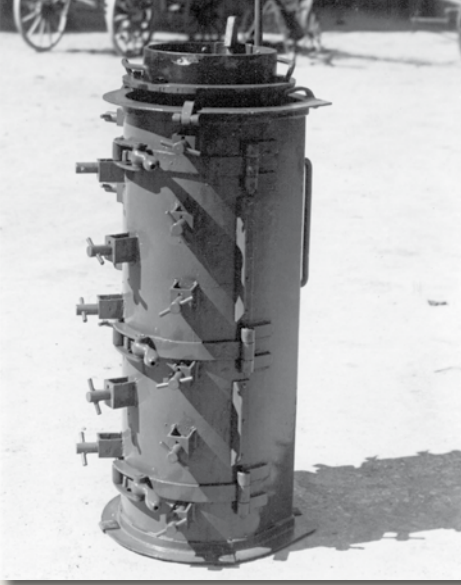
Also at this time the moveable tilting table machine for the continued and efficient production of kerbstones and U-channels, together with bricks was successfully marketed.

An overview of the equipment and machines of the early years is seen in the gallery of the company's history.

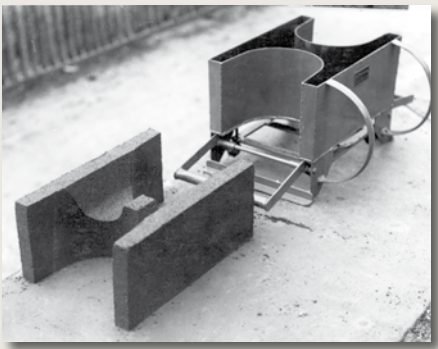
**Photo gallery Company's History Prinzinger**



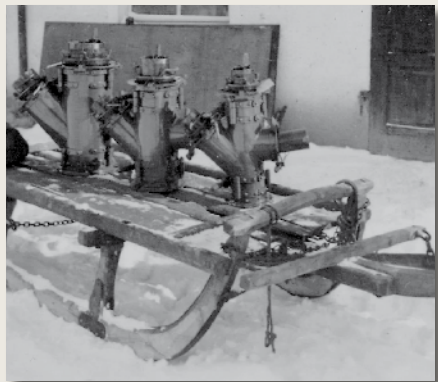
Brochure of modern Prinzinger moulds at the time about 1930



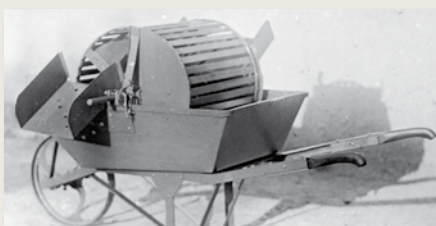
Mould Equipment for production of concrete drain pipes with splitted outer mould and shrinkable inner core about 1910



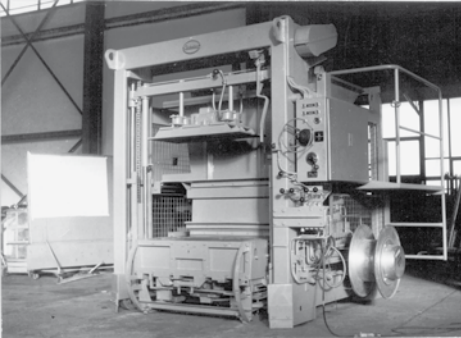
Tilting mould with ejection device for shuttering stones



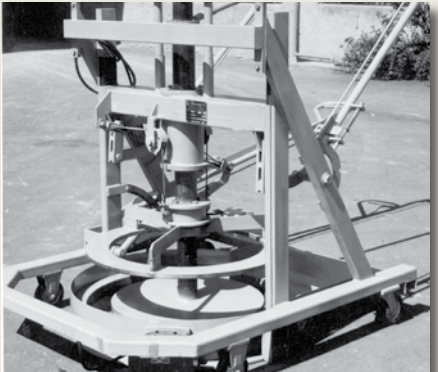
3 concrete pipe moulds for junction pipes are collected with the horse-drawn sleigh about 1920



Potato cleaning device about 1895



Vibration tilting machine type Rapidomat 1000



Egg-layer for concrete supporting rings



Concrete moulds are picked up with horse-drawn vehicle about 1907



Mobile concrete mixer with lift bucket for feeding and water containers - the steel construction is riveted, about 1910 - 1930



With a horse-drawn carriage a cone mould and a mould for gutters are collected around 1920



Oskar Prinzinger with VW Beetle



The loading of concrete pipe moulds on a truck in 1940 required much man power.

# History of PRINZING-PFEIFFER

## Pfeiffer 1900



The registration of the newly formed company Maschinenfabrik Ettlingen GmbH took place at the Chamber of Commerce Ettlingen in the year 1900. Quickly the metal workshop developed into a fabrication company manufacturing moulds for concrete products and particularly for concrete pipes. It was in 1903 that engineer Heinrich Schoth joined the company as co-owner in the position of technical manager and set about developing the "Ettlingen Concrete Pipepress" for the industrialised production of concrete pipes. Prior to this point concrete pipe was cast or tamped manually.

Friedrich Pfeiffer Dipl. Ing in 1929 became a shareholder and developed the Packerhead machine (coreless pipe press) in which the rising rotating piston compacted concrete instead of a vibrating core. Within a few years this revolutionary manufacturing process

was sold throughout Germany, Europe and other overseas markets.

Upon Heinrich Schoth's retirement the company name was changed to "Maschinenfabrik Ettlingen Friedrich Pfeiffer KG". The Packerhead machine was further developed to produce a range of concrete pipe having internal diameters from 300 mm to 1200 mm and an effective length of 2.0 m. New creations followed shortly such as moulds for larger diameter pipes, centrifugal spinning machines for pressure pipe, transmission poles and piles. It was during 1961 that the first turnkey factory for the manufacture of pressure pipe was completed in Teheran. Company expansion in 1963 led to the opening of the Langenhahn / Westerwald factory.

Entering the business Hans-Ulrich Pfeiffer and Reinhold Pfeiffer Dipl. Ing further developed the company vibra-

tion machines and in 1969 the Radial Press was created. During this period complete plants for concrete pipe and pole manufacturing were delivered. 1972 saw the company move to new facilities within the industrial estate of Ettlingen.

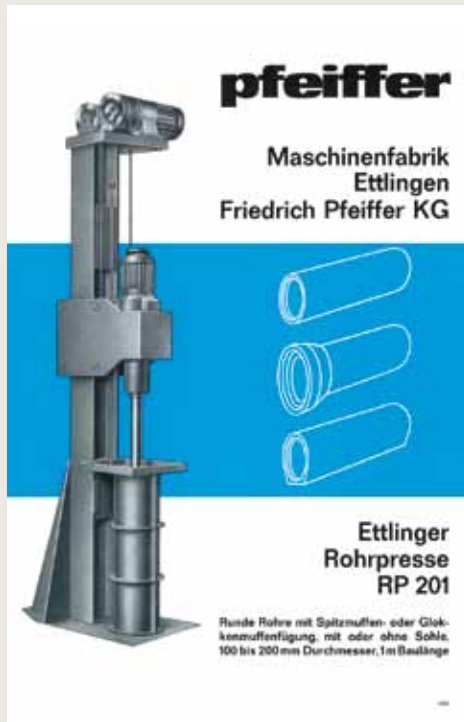
Through diligence and technological progress "Maschinenfabrik Ettlingen Friedrich Pfeiffer" became known worldwide for the unique manufacture and supply of machinery, mould equipment and automatic handling systems for all sizes of wet and dry cast pipe, centrifugal spun pipe / pole and manholes.

An overview of the early years of production and equipment is shown in the company history gallery.

Photo gallery Company's history



Trade fair Munich 1955



Brochure pipe press 1955



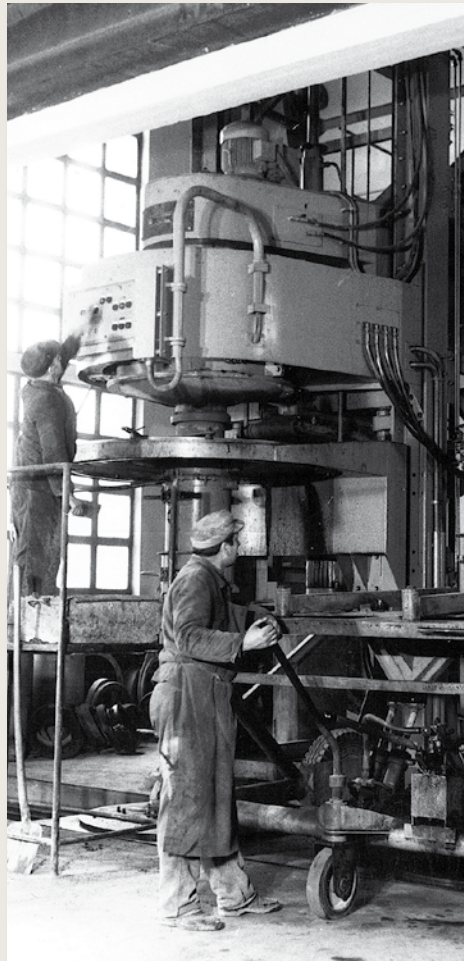
Production hall Ettlingen approx. 1938



Pipe manufacturing 1958



Production hall Ettlingen approx. 1938



Pipe press 1955



Blacksmith 1930



Brochure moulds 1955

# History of PRINZING-PFEIFFER

## PRINZING-PFEIFFER today



More than 150 years after PRINZING's foundation, the company moved to a new address, but is still located in Blaubeuren, Germany.

Since 2008 PRINZING develops, tests and produces in the completely re-built complex for customers around the world.

The year 2014 is also an important step for the development of PRINZING. During the formation of the TOPWERK Group the also traditional company PFEIFFER and their range of products was integrated.

PFEIFFER, founded in 1900 and with installations for production of concrete pipes all over the world, represents together with PRINZING more than 250 years experience in the area of production plants for the manufacture of precast concrete parts for the infrastructure construction.

Together with PFEIFFER, a worldwide leading German producer of pipe machines, there is a supplement of the machine program, which is unique in this kind.

PRINZING-PFEIFFER has developed within the last decades this extensive product portfolio and successfully established on the world markets. The huge machine- and product program is only one unique feature of company PRINZING-PFEIFFER – more are countless patents, developments and special solutions.

Thus PRINZING now offers a complete program for the production of precast concrete elements, which can be adapted to each customer's request and need. Either for small and medium quantities, as well as large quantity production various production systems are available.

It is differentiated between **Production systems for precast concrete products** for

- Pressure line construction
- Sewerage
- Drainage
- Power supply ducts and telecommunication
- Sewage water treatment and rainwater utilization
- Building construction
- Products for roadways

and

**Standard concrete products.**

Additional to the production plants PRINZING-PFEIFFER offers the complete accessories, like mixing plants, cage welding machines and handling systems from one source, to realise for our customers worldwide, at each location, ready-for-use TOPWERKE.

# Production methods

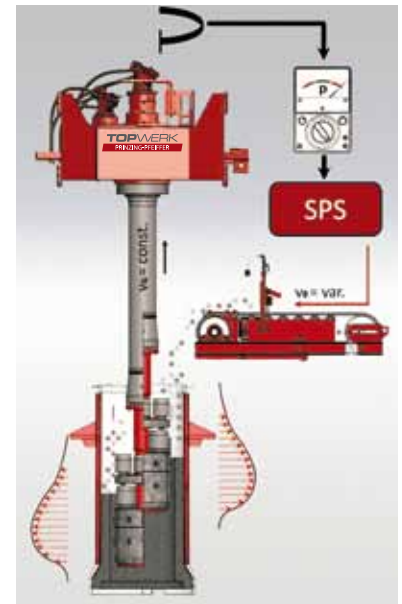
## Radial-Pressing method

PRINZING-PFEIFFER, with the world's largest number of installed systems with counter-rotating compression tool, is mainly responsible for the development of the modern radial-pressing-method.

### The Advantages of the Radial-Pressing method:

- Fast and homogeneous concrete compaction by radial compression
- Tension-free embedding of the reinforcement by counter-rotating compression tool
- Low water-cement ratio and thus very high concrete strength by economical cement consumption
- Exact product length by full mould space limitation
- High reliability of product quality through fully automated compression regulator
- Simple machine design without deep foundation pit and expandable up to fully automatic pipe production line

The counter-rotating compression tool and the fully automatic compaction control is a prerequisite for the tension-free and complete embedding of the reinforcement.



Schematic representation of the fully automatic compaction regulator of the RADIAL PRESS

## Vibro-Compaction and Pressing method

PRINZING-PFEIFFER was significantly involved in the development of the vibro-compaction and pressing method for the concrete precast concrete industry. PRINZING-PFEIFFER has continuously developed the vibro-compaction and pressing method

and adapted for an ideal production of more different concrete elements. The variety of all kind of compaction systems (e.g. central vibrator, vibration table, etc.) allow short cycle times and highest product quality.

### Advantages of the Vibro-Compaction and Pressing method:

- Fast and homogenous compaction by vibration and additional hydraulic pressing force
- The highly effective central vibrator, one vibration unit for all product dimensions as a rule
- Highest product quality by the use of amplitude and frequency controlled vibrating table
- Low water-cement ratio and therefore higher strength of the concrete elements
- Short cycle times by fast compaction process and immediate demoulding
- Efficient production of all requirements up to a fully automatic production system



**PRINZING-PFEIFFER GmbH**

Vinzenz-Pallotti-Straße 3  
65552 Limburg a. d. Lahn, Germany

Phone: +49 2736 497 611  
info@prinzing-pfeiffer.com

Office Blaubeuren  
Zum Weißen Jura 3  
89143 Blaubeuren, Germany

[www.topwerk.com](http://www.topwerk.com)  
[www.prinzing-pfeiffer.com](http://www.prinzing-pfeiffer.com)

