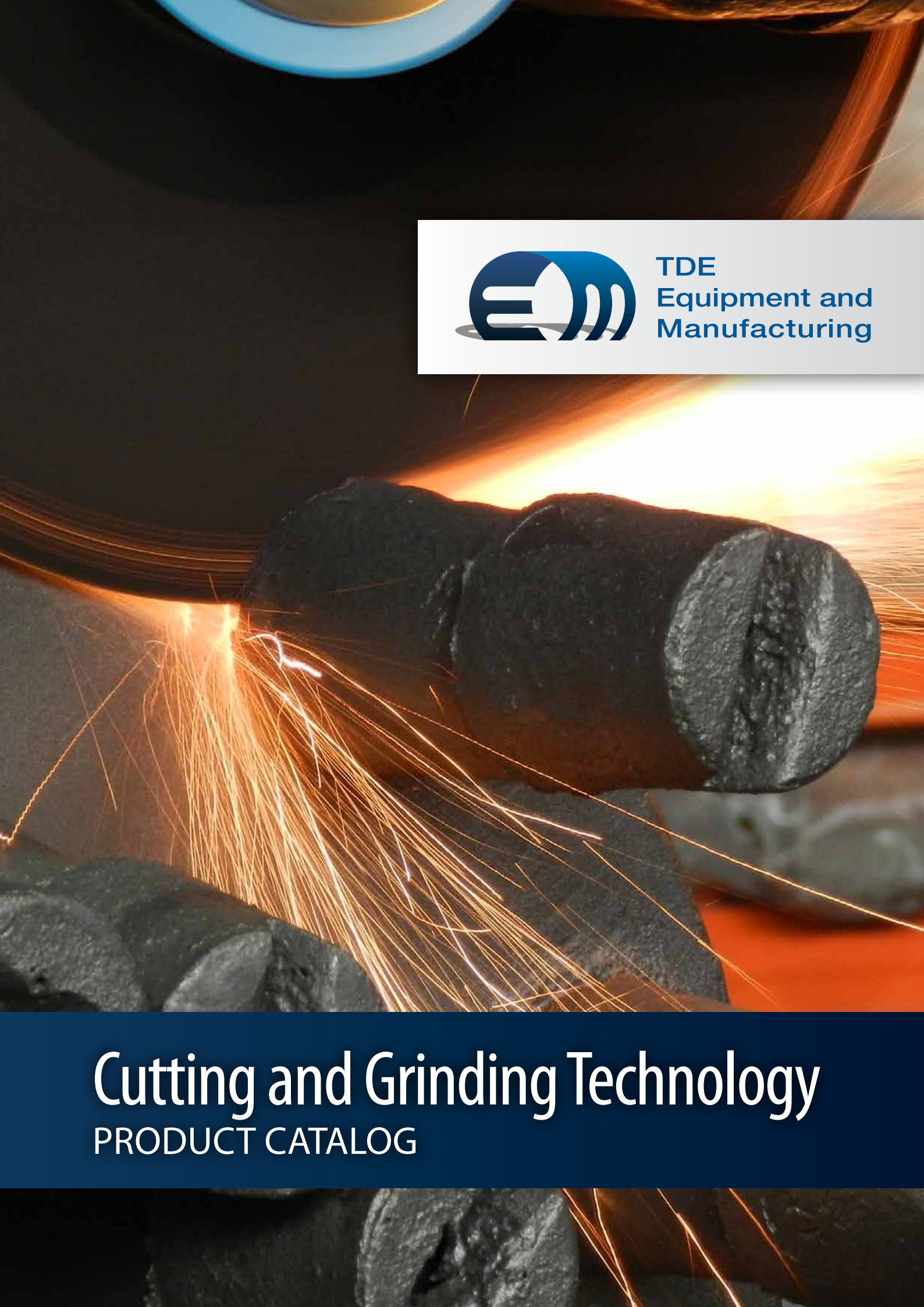


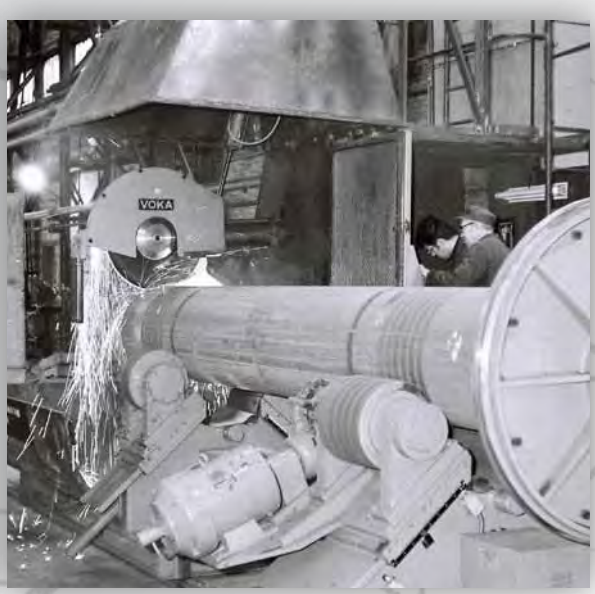
TDE
Equipment and
Manufacturing

Cutting and Grinding Technology

PRODUCT CATALOG

TDE Equipment and Manufacturing

VOKA is an international, recognizable brand which has been established for over 50 years in manufacturing high quality cutting and grinding machines used in the metal processing and foundry industries. As a global leader in technology we offer an extensive range of high performance cutting and grinding machines which excel in the most challenging of applications. VOKA machines are a product of TDE Equipment and Manufacturing GmbH, a member of the TDE Group. As part of the TDE Group we continue to increase our knowledge and service to benefit our customers. Even our machines from the first generation (50 years ago) are still in use today.



E&M Foundry Machines

E&M Steelwork Machines

VOKA®
by TDE Group

Pendulum Grinding Machines

The pendulum prinding machines from our KPS and ZPS series are perfectly suited for the rough grinding of medium and heavy castings. Due to the sturdy construction, VOKA Grinders guarantee a low maintenance and trouble-free operation. The power transmission from the motor to the grinding wheel can be either selected as a loss-free cardan drive (KPS) or a high performance toothed-belt drive (ZPS). All of our pendulum grinding machines are equipped with a low-vibration handling system. Using VOKA products you will always achieve superior and economical grinding results. Our machines also enable a high level of customization.

Pendulum Grinding Machines with Cardan Drive

Type	Disc Dimension	Drive Power	max. Disc Speed
KPS 304	Ø300/30/30 mm	4 kW	60m/sec
KPS 407	Ø400/40/40 mm	7,5 kW	60m/sec
KPS 518	Ø500/50/127 mm	18,5 kW	60m/sec
KPS 630	Ø600/60/203 mm	30 kW	60m/sec

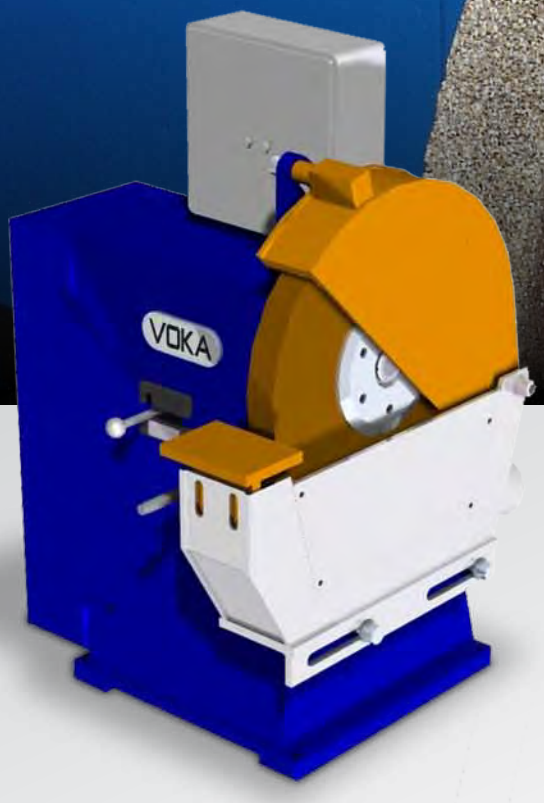
Pendulum Grinding Machines with Toothed Belt Drive

Type	Disc Dimension	Drive Power	max. Disc Speed
ZPS 304	Ø300/30/30 mm	4 kW	60m/sec
ZPS 407	Ø400/40/40 mm	7,5 kW	60m/sec
ZPS 518	Ø500/50/127 mm	18,5 kW	60m/sec
ZPS 630	Ø600/60/203 mm	30 kW	60m/sec

The models ZPS 518 and ZPS 630 are available with an optional pressurized raising device. Due to the mechanized intensification of the grinding pressure, these machines feature a considerable increase of grinding output in conjunction with a minimum physical effort from the operator.

Foundry Machines

High Performance Rough Grinding Machines



VOKA high performance rough grinding machines are built with a modern foundry compatible design. The sturdy steel construction and the rugged spindle bearing guarantee a smooth and vibration- free operation under high stress conditions. The maintenance-free grinding spindle is driven by a three stage double V-belt with a positive locking device to prevent an excessive increase in speed. The safety caps also comply with DSA requirements and are equipped with „RED-VISOR“ safety installations to ensure a wheel speed of 60 m/s.

Specification

- User friendly belt cover for fast replacement of the belt
- Heavy, smooth spindle bearing
- Quick and easy wheel change to reduce the standing time of your machine
- A removable cleaning flap for the bottom guard cover
- Sturdy and robust designed belt drive
- High safety level during operation

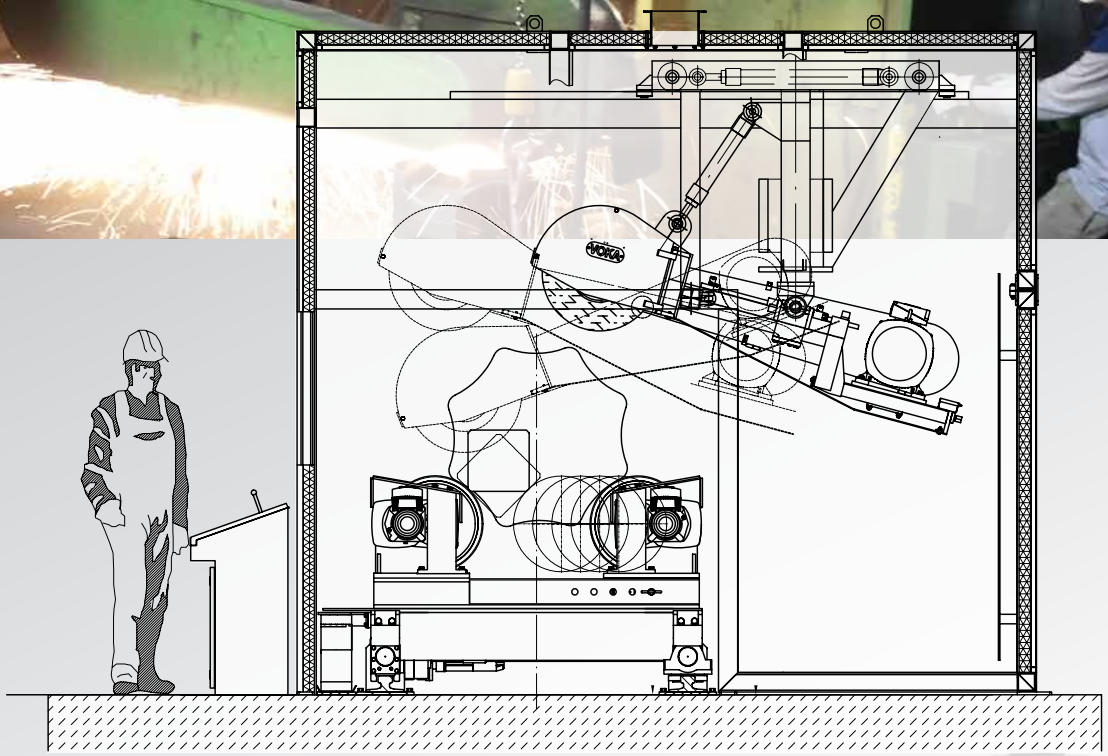
Stationary Rough Grinding Machines

Type	Disc Dimension	Drive Power	max. Disc Speed
HSE 60-600	Ø600/60/203 mm	7,5 - 11 kW	60 m/sec
HSE 60-600 UF	Ø600/60/203 mm	7,5 kW	60 m/sec

The HSE 60-600 UF is defined with a constant grinding power and cutting speed up until the change of the wheel. The spindle speed is electronically controlled by a frequency inverter (UF) and allows a stable wheel speed of 60 m/s. Furthermore, the HSE 60-600 UF has a short stopping performance time for the grinding wheel during switch-off.

VOKA® by TDE Group

Remote Control Grinding Machines



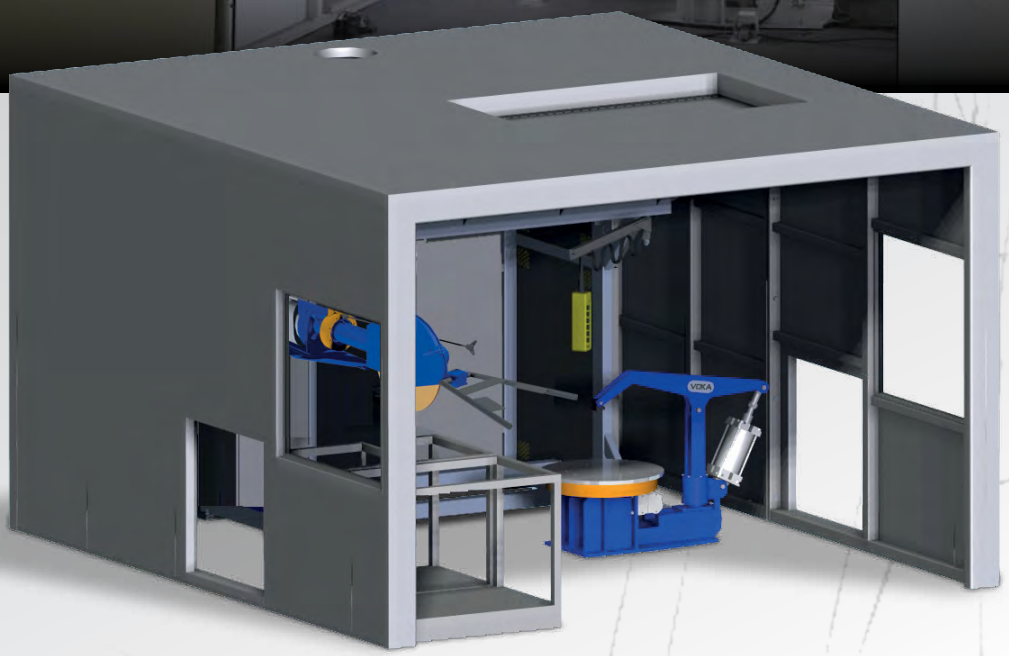
The remote controlled pendulum grinding units from VOKA enable rough grinding operations for casting surfaces or ingots, without any physical exertion from the operator. The grinding machine is controlled with a joystick at the control panel. The suspended grinding unit travels within a heavy machine opening which also acts as a noise control cabin. In addition to our standard models equipped with a normal pendulum grinding aggregate, bespoke designs are also available with a hydraulic wheel drive and automatic speed control. The longitudinal movement of the grinding unit is 800mm and the transverse movement is 500mm.Storage systems are also available at your request to store work pieces, stationary or travelling work piece carriages.

Remote Control Grinding Machines

Type	Grinding Unit	Disc Dimension	Drive Power	max. Disc Speed
SMP 518	ZPS 518	Ø500/50/127 mm	18,5 kW	60/80 m/sec
SMP 630	ZPS 630	Ø600/60/203 mm	30 kW	60/80 m/sec

Foundry Machines

Fettling Cabins



The fettling cabins have been developed to create practical grinding places which meet the safety requirements regarding dust and noise control. In order to accomplish a reduction of grinding noise to a required level, all cabin walls consist of a sound absorbing material. A trolley conveyor is fixed from the ceiling of the cabin which allows a smooth running travel of the devices and pendulum grinding units with a longitudinal and transverse movement by hand. The cabins can be installed at any location without any required special measures. The connection of dedusting installations are equipped with connecting pipes. VOKA provides size adjustments to meet your requirements to create the perfect sized fettling cabin.

Fettling Cabins

Type	Dimensions
PK 223	L 2m/ W 2m/ H 3m
PK 323	L 3m/ W 2m/ H 3m
PK XXX- S	L Xm/ W Xm/ H Xm

VOKA® by TDE Group

Cylindrical Grinding Machines

The simple, rugged and foundry designed build of our cylindrical grinding machines, ensures a high system availability. Cylindrical grinding machines are perfectly suited for the fettling and removal of joint surfaces at cylindrical castings with diameters of either 150-600mm or 200-400mm.

Specification

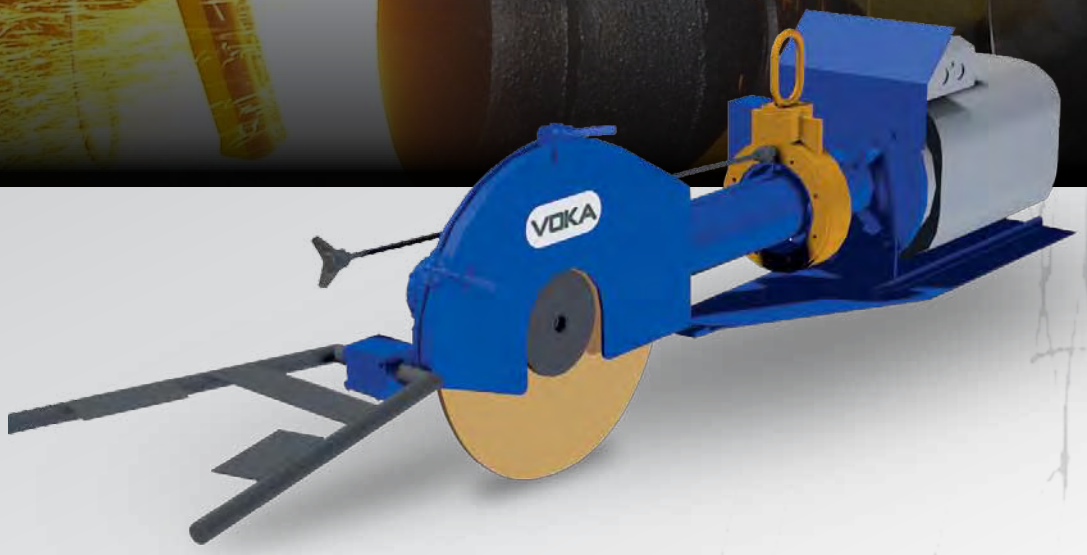
- Unit weights up to 100kg
- Brake discs
- Brake drums
- Clutch components
- And other rotationally symmetrical parts

Cylindrical Grinding Machines

Type	Disc Dimension	Drive Power	max. Disc Speed
RSM 622	Ø600 mm	22 kW	45 m/sec
RSM 630- RT	Ø600 mm	30 kW	45 m/sec

Foundry Machines

Pendulum Cut-Off Machines



For the efficient separation of runners and risers from castings, these hand operated machines offer universal applications. Due to a movable suspension the cast piece can be used without moving it to different levels. The approved VOKA cardan system allows a loss-free drive of the cut-off wheel, but you can also choose a high performance toothed belt drive. As with all our machines, you also have the ability to customize our pendulum cut-off machines according to your needs.

Pendulum Cut Off Machines with Cardan Drive

Type	Disc Dimension	Drive Power	max. Seperation Section	Disc Speed
KPT 304	Ø300/4/30 mm	4 kW	Ø50 mm	80 m/sec
KPT 411	Ø400/4/60 mm	11 kW	Ø80 mm	80 m/sec
KPT 518	Ø500/5/60 mm	18,5 kW	Ø100 mm	80 m/sec
KPT 637	Ø600/6/60 mm	37 kW	Ø120mm	80 m/sec

Pendulum Cut Off Machines with Toothed Belt Drive

Type	Disc Dimension	Drive Power	max. Seperation Section	Disc Speed
ZPT 304	Ø300/4/30 mm	4 kW	Ø50 mm	80 m/sec
ZPT 407	Ø400/4/40 mm	7,5 kW	Ø80 mm	80 m/sec
ZPT 518	Ø500/5/40 mm	18,5 kW	Ø100 mm	80 m/sec
ZPT 637	Ø600/6/60 mm	37 kW	Ø120mm	80 m/sec

VOKA® by TDE Group

Foundry Cut-Off Units

The foundry cut-off unit GTE is the perfect symbiosis of a hand operated pendulum cut-off machine and stationary cut-off device. The machine unit can be easily installed and a fast adjustment of the cut-off wheel to the required cutting-off level also grants an economical operation in casting single or a series of units. The motorized height adjustment (200mm) and transverse movement (500-600mm) of the cut-off unit is conveniently controlled via the machine handle. The robust machine portal is built to serve as a spark chamber and is provided with connection pieces for the extraction of dust. Utilising our expertise and knowledge in special purpose machinery manufacturing we can offer you a wide range of customised configurations.

- Cut-off unit is pivoted on a cross joint
- Clean cutting eliminates costly alterations
- Drive of the cut wheel either the high performance toothed belt drive or VOKA cardan system
- Sturdy rotary table for clamping and moving of the castings with pneumatically operated lever

Foundry Cut-Off Units with Cardan Drive

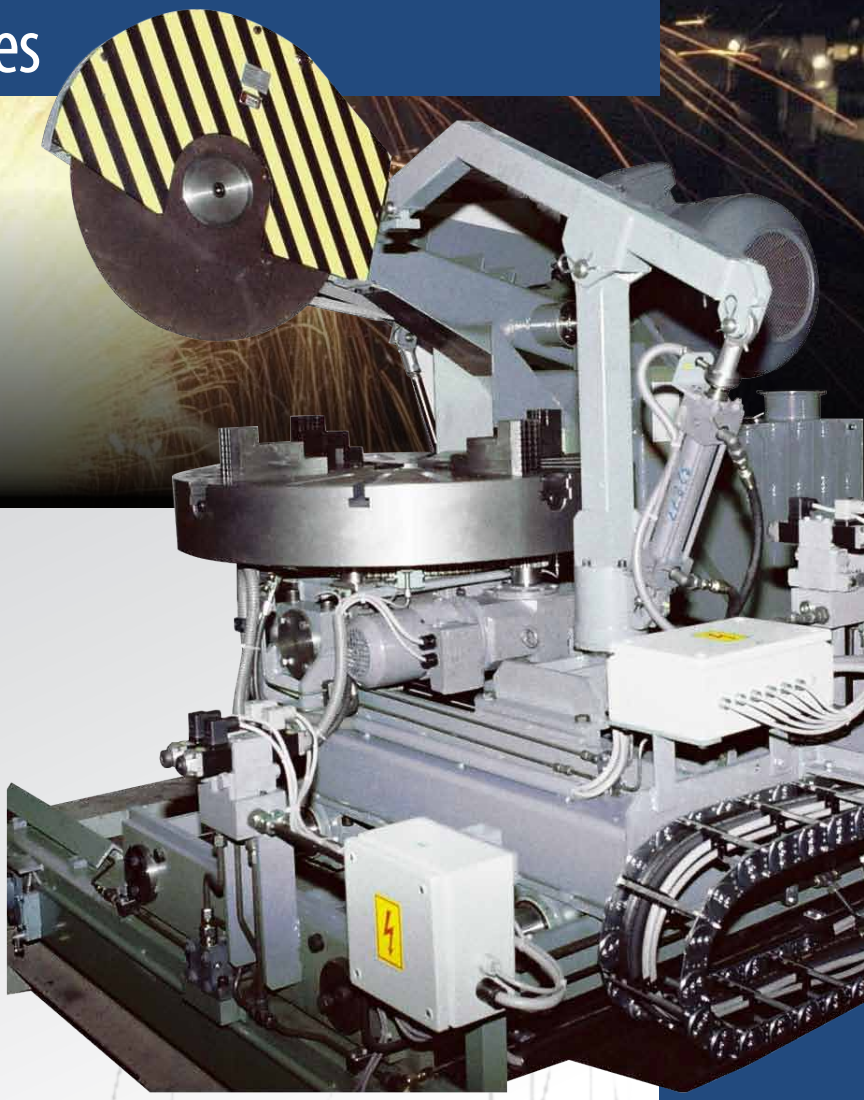
Type	Cut Off Unit	Scheibendim.	Drive Power	max. Seperation Section	Disc Speed
GTE 518- KA	KPT 518	Ø500/5/60mm	18,5 kW	Ø100 mm	80 m/sec
GTE 637- KA	KPT 637	Ø600/6/60 mm	37 kW	Ø120 mm	80 m/sec

Foundry Cut Off Units with Toothed Belt Drive

Type	Cut Off Unit	Scheibendim.	Drive Power	max. Seperation Section	Disc Speed
GTE 518- ZA	ZPT 518	Ø500/5/40 mm	18,5 kW	Ø100 mm	80 m/sec
GTE 530- ZA	ZPT 530	Ø500/5/40 mm	30 kW	Ø100 mm	80 m/sec
GTE 637- ZA	ZPT 637	Ø600/6/60 mm	37 kW	Ø120 mm	80 m/sec
GTE 645- ZA	ZPT 645	Ø600/6/60 mm	45 kW	Ø140 mm	80 m/sec

Foundry Machines

Stationary Cut-Off Machines



The stationary cut-off machines of the type GTM, are optimized for the separation of runners and risers from serial castings. The machines are developed with a mechanical assembly technique to allow flexible adjustments to various problems.

- To grant optimum working conditions, work piece tables or travelling work piece carriages can be installed
- Complete shielding of the installation with sound proof cabins to control noise and dust
- For cut-off wheels with diameters exceeding 800mm an optional hydraulic cut-off wheel drive with automatic speed control is available

Stationary Cut-Off Machines with Electrical Drive

Type	Disc Dimension	Drive Power	max. Seperation Section	Disc Speed
GTM 655	Ø600/6/100 mm	55 kW	Ø140 mm	80 m/sec

Stationary Cut Off Machines with Hydraulic Drive

Type	Disc Dimension	Drive Power	max. Seperation Section	Disc Speed
GTM 890	Ø800/8/80 mm	90 kW	Ø200 mm	80 m/sec
GTM 1100	Ø1000/10/127 mm	110 kW	Ø230 mm	80 m/sec

VOKA® by TDE Group

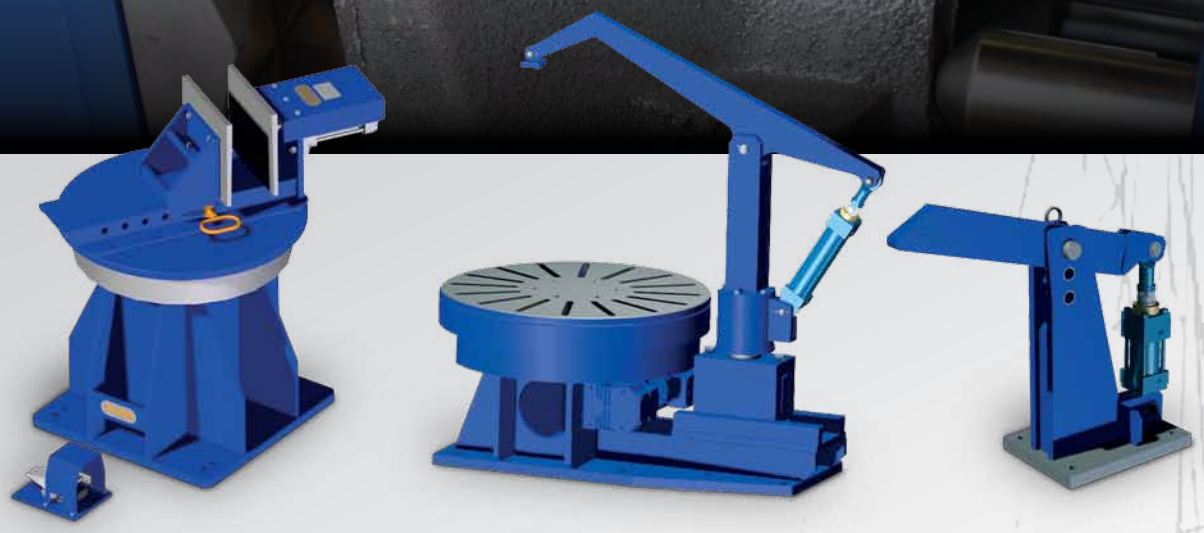
Casting Manipulators

Our casting manipulators allow a clamping, rotating, swivelling and positioning of castings for the fettling. The sturdy design grants the processing of piece weights up to 500kg. Rotation and tilting is accomplished using gear motors, which are controlled via foot switches. Special fixtures for the work pieces ensure a high level of safety at work.

Casting Manipulators

Type	max. Unit Weight
GPM 200	to 200 kg
GPM 500	to 500 kg

Clamping Devices



We offer different devices for the clamping of the castings. Due to various shifting possibilities the adjustment is guaranteed to a broad variety of work piece sizes.

Work Piece Clamping Plate

- Electric rotary table
- Pneumatic/hydraulic actuated lever

Parallel Clamping Device

PSS 1
HSS 6

- Particularly suitable for work pieces with an irregular surface

Lever Transmission Clamping Device

- Pneumatic
- A simple but effective clamping unit
- Possible specialized solutions for casting shells

VOKA® by TDE Group

Abrasive Cutting

Nowadays abrasive cutting is applied as a high performance procedure within most fields of steel production and the steel processing industry. Especially the abrasive hot cutting of billets at temperatures of 700-1000°c has become increasingly important. After the product process (forging or rolling) the material is cut immediately to the required lengths.

The drive of the grinding and cutting wheels through hydraulic motors, shows the high technical standards of our products. Our machines represent a high level of quality and processing, with a robust construction, simple and safe operation especially for high cutting and grinding performance.

The important parameters during abrasive cutting, to save energy costs are:

Small contact area and pressure angle of the cutting disc are resulting in a significant reduction of the required engine power.

Due to the smooth surface quality created by abrasive cutting, no post-processing is necessary. As a result of this technique energy and work time will be saved, which provide an economic advantage.

Special Advantages

- Short cutting times
- Long life span of the cutting wheels
- Energy-saving technology
- Smooth surface quality
- No burr formation

Further applications used by our machines for the abrasive cutting of:

- Layers of rods
- Test pieces
- Tubes
- Billets

The abrasive cutting technology is used when alloyed and high strength grades of steel have to be cut. Traditional methods such as sawing and flame cutting are not economical or suitable. The application is beneficial not only in steel production, but also in larger fields of steel processing. Along with our various cutting machines we also manufacture and supply you with the required accessory machinery. Such as roller tables, length stops, fettling cabins, feeding and ejecting devices.

Billet Cut-Off Machines

Our high efficient machines are used worldwide in rolling mills and forging plants for the cutting of cold or hot, high alloyed and super alloyed materials. VOKA machines are constructed for the use of wheel dimensions up to the diameter Ø of 1850mm.

Billet Cut-Off Machines with Electrical Drive

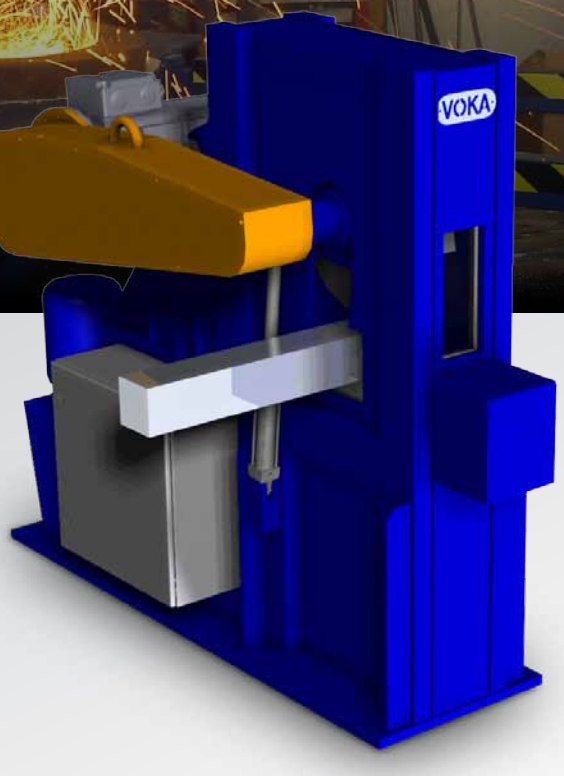
Type	Disc Dimension	Drive Power	max. Seperation Section	Disc Speed
TM 645	Ø600 mm	45 kW	Ø140 mm	80 m/sec
TM 675	Ø600 mm	75 kW	Ø140 mm	80 m/sec
TM 875	Ø800 mm	75 kW	Ø200 mm	80 m/sec
TM 8110	Ø800 mm	110 kW	Ø200 mm	80 m/sec

Billet Cut-Off Machines with Hydraulic Drive

Type	Disc Dimension	Drive Power	max. Seperation Section	Disc Speed
TM 675- HY	Ø600 mm	75 kW	Ø140 mm	80 m/sec
TM 8160- HY	Ø800 mm	160 kW	Ø200 mm	80-100 m/sec
TM 10200- HY	Ø1000 mm	200 kW	Ø250 mm	80-100 m/sec
TM 12250- HY	Ø1250 mm	250 kW	Ø300 mm	80-100 m/sec
HTM 1850/ 250- HY	Ø1850 mm	250 kW	Ø400 mm	80-100 m/sec

VOKA® by TDE Group

High Performance Cut-Off Machines



We developed our high performance cut-off machines for the cutting of rods, squared billets and profiles for all material qualities including high alloy steels. This type of machine has been primarily designed for the use in the steel processing industry for the cross-cutting of smaller and medium sized bars and profiles. The cutting unit is equipped with a complete enclosed direct drive, therefore there is no loss in transmission.

High Performance Cut-Off Machines with Electrical Drive

Type	Disc Dimension	Drive Power	max. Seperation Section	Disc Speed
W 522- ZA	Ø500 mm	22 kW	Ø100 mm	80 m/sec
W 537- ZA	Ø500 mm	37 kW	Ø100 mm	80 m/sec
W 622- S	Ø600 mm	22 kW	Ø140 mm	80 m/sec
W 637- ZA	Ø600 mm	37 kW	Ø140 mm	80 m/sec
W 645- ZA	Ø600 mm	45 kW	Ø140 mm	80 m/sec

Tube Cut-Off Machines

In the various fields of chemical plants or the oil industry, tubes and pipes of high strength materials are required. VOKA developed a special type of cut-off machine for cutting those parts in a rotating cutting process. The tubes are placed on driven roller supports, which rotate the work piece. Afterwards the cutting wheel is fed into the work piece with a synchronized drive. This process ensures an optimal wheel utilization and the cut surfaces are smooth, free of burrs and hardness. We produce tube cut-off machines for almost any pipe diameter.

Tube Cut- Off Machines with Electrical Drive

Type	Disc Dimension	Drive Power	Disc Speed
RTM 637- ZA	Ø600 mm	37 kW	80 m/sec

Tube Cut-Off Machines with Hydraulic Drive

Type	Disc Dimension	Drive Power	Disc Speed
RTM 875- HY	Ø800 mm	75 kW	80-100 m/sec
RTM 10160- HY	Ø1000 mm	160 kW	80-100 m/sec
RTM 1250- HY	Ø1250 mm	250 kW	80-100 m/sec

VOKA® by TDE Group

Tube Grinding Machines

Our tube grinding machines are ideal for pre-treating rolled, forged and drawn thick-walled tubes. The surface is rough ground for subsequent machining.

For tube lengths up to 12m and tube diameters from 200mm.

Tube Grinding Machines

Type	Disc Dimension	Drive Power	max. Disc Speed
ARSM	Ø500 mm	30 kW	60 m/sec

Steelwork Machines

Machines for Cutting Test Pieces

The high increasing demand in terms of quality control and material testing require an efficient method for the cutting of samples out of work pieces. In the production of large forgings such as ship crankshafts and valve housings the conventional used methods of drilling and sawing are not economical. These special developed universal cut-off machines for test pieces, permit cutting in the horizontal and vertical plane. The cutting feed is infinitely regulated for an optimum adaption to the material and cutting wheel. A driven work piece carriage with a rotating table is used for the positioning of the work piece.

Machines for Cutting Test Pieces

Type	Disc Dimension	Drive Power	Disc Speed
UTM 600/50- S	Ø600 mm	45 kW	80 m/sec
UTM 1000/160	Ø1000 mm	160 kW	80 m/sec
PTM 418- Za	Ø400 mm	18,5 kW	80 m/sec

VOKA® by TDE Group

Block and Billet Grinding Machines

We developed our block and billet grinding machines for the removal of cinder from cast or forged blocks. The grinding process for flat material can be executed by remote control, manually or automatically. The manual process is perfectly suited for the grinding of defects on the surface of circular, rectangular and polygonal blocks. For flat bars a special work piece carriage is used with a chain turn over device. Round blocks are ground with the rotation grinding technology. The standard diameter of the grinding wheels is 600mm. The grinding process runs manually by remote control or automatically.

Billet Grinding Machines

Type	Disc Dimension	Drive Power	max. Disc Speed
SMP 75- HY	Ø600 mm	75 kW	60 m/sec
ASM 600/160- HY	Ø600 mm	160 kW	60 m/sec

Block Grinding Machines

Type	Disc Dimension	Drive Power	max. Disc Speed
GPL 630	Ø600 mm	30 kW	60 m/sec
ASM 600/200- HY	Ø600 mm	200 kW	60 m/sec

Steelwork Machines

Special Machinery

Based on our extensive product range, we are in the position to develop and build customized cut-off and grinding machines. Each of our special purpose machines will be adjusted to your needs and built by our dynamic and innovative team of technicians. Our experience and knowledge allows us to offer you grinding and cutting solutions to optimize your production processes.

- Ingot Grinding Machines
- Plate Grinding Machines
- Continuous Casting Cut-off Machines
- Cut-off Machines for Layers
- Traverse Cut-off Machines

VOKA® by TDE Group

Feeding and Ejecting Devices

Along with the different cutting machines we also manufacture the required accessory machinery. According to your requirements, the size and burden of our roller tables, length stops, feeding and ejecting devices can be chosen.

- Material supports and separate devices
- Roller tables
- Length stops
- Feeding and ejecting devices

Steelwork Machines


More than 50 Years of Experience
Highest Quality
Outstanding Economic Efficiency
Optimum Working Environment
VOKA®
by TDE Group

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