





Single-block systems  
for wire processing

## Future technology for the wire industry

### Wire for tomorrow's world

Markets are in movement. They demand new technologies that are as flexible as possible, and they demand them fast. At KOCH, you will find the solutions today to tomorrow's challenges. Wire, after all, plays an important role in every single progressive industry. For reliable production and mobility. For strong connections for architecture. And for highly sensitive applications in medicine.

Do you need to integrate a wire production system into your production facilities? Then you can count on us. Ernst Koch GmbH & Co. KG is one of the world's leading manufacturers of wire drawing and cold rolling systems for the iron and steel wire industry who are able to build their own machinery. As a system supplier, we plan, supply and install complete machine lines for the production of wire that are designed for your particular task and implemented with all the components you need.

### Welcome to KOCH

The quality of our consultancy, products and services is of the very highest standard, and has been for more than 90 years. Customers in more than 60 countries value this long experience and our pioneering technological capabilities. Take, for example, the production of cold heading wire and ball bearing wire: KOCH is one of the world's market leaders in single-block drawing systems for the production of this kind of wire, up to 50 millimeters in diameter.





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## Quality steel wire in medium and large diameters

### Promoting mobility, making connections

Wire plays a part in the function and safety of many aspects of mobility. It can be found in the running gear of high-speed trains as well as automobiles, agricultural equipment and general machinery. Wire is processed to create connecting elements in the furniture industry, in construction and in mechanical engineering. In wind power turbines, roller bearing bodies made of wire ensure that the rotors keep on turning and turning.

### Solutions for the markets of the future

Each product has its own requirements. KOCH is ready to meet the aims of many branches of industry. In construction, engineering and almost any area in which technology is used, wire is essential to the way things work. Our single-block wire processing systems perform superbly in the production of industrial wire of medium and large diameters. The result is very high-quality wire that can be reproduced dependably.





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## Harnessing forces systematically

### World-class performance

Cold heading wire, stainless steel wire, spring steel wire, bare wire, ball bearing wire – when it comes to the manufacture and processing of medium and large diameter wire, KOCH single-block drawing systems are among the world's most capable machines. Our range encompasses different sizes of systems that can be equipped according to the use for which they are intended.

### Uncompromisingly high quality

Building and manufacturing our single-block drawing machines in-house makes us independent, and ensures that quality is consistently high. For complete drawing lines with perfectly matched components, we add to our systems devices that are made by subsidiaries and partner companies. The benefit for our customers is that we can offer the full service of planning and managing their

entire system, including a control unit to match. KOCH is also responsible for complete safety concepts for the entire production line.





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## KHZ – strong and versatile

Customers all over the world value KOCH's KHZ horizontal wire drawing blocks, for their sturdy build and for the high quality of the wire they produce. The range encompasses systems from 100 to 500 kN traction. Capstan diameters are between 800 and 1,200 millimeters.

The drawing block in the KHZ series consists of a machine unit and reducing gear as well as a water-cooled

horizontal capstan. A frequency controlled three-phase motor drives the system. An automatic pull-in dog, which KOCH integrates according to the feature level of each system, makes things easier for the people operating the system. It makes feeding in the wire much easier and safer, especially with large diameters.



### Machine sizes\*

Designation	HLZ 16	HLZ 28	HLZ 36	HLZ 42	HLZ 50
<b>Possible inlet diameter</b> depending on wire tensile strength	8 - 16 mm	10 - 28 mm	10 - 36 mm	14 - 42 mm	20 - 50 mm
<b>Max. pulling force</b>	100 kN	200 kN	300 kN	400 kN	500 kN
<b>Possible drawing capstan diameter</b>	800 mm	900 mm	900 mm 1000 mm	1000 mm	1200 mm
<b>Max. drawing speed</b> depending on working range	3.0 m/s	3.0 m/s	3.0 m/s	3.0 m/s	2.5 m/s

\* Version spring 2014. Technical data and working range to be optimized according to the project and thus can be above or below the data of this table.

## A synergy of expertise

### Proven partnerships

When we make systems that manufacture quality wire of medium and large diameter, we assemble customized drawing blocks and wire collecting systems that we make in-house. This is augmented by machinery for the periphery of the drawing line made by selected partner companies. Top-performance additional units include pay-off

reels that bend and pre-straighten the wire. Wire preparation is completed by special machines for wire pointing, milling and threading in the front end of the wire. At the end of the drawing line, specially made modules ensure that the wire is spooled without tension. Diameters can be adjusted for different operating ranges.

### From single module to the line

KOCH brings together the various modules to create a custom line that makes high-quality wire, which can be reproduced long-term. The services we provide range from concept design and project planning, to management, programming and installation, to comprehensive support throughout the entire life of the line. Customers

also benefit from our innovations in user interfaces and process visualization.



**KAM**  
Wire pay-off



**KSA**  
Spool pay-off



**ÜKA**  
Overhead pay-off



**WEZ**  
Reverse bending descaler



**WBE**  
Brush descaler



**SEZ**  
Grinding descaler



**PERS**  
Polishing system



**KHZ**  
Horizontal bull block



**KEB**  
Vertical drawing machine



**KHB**  
Horizontal drawing machine



**KHS**  
Horizontal spooler



**KVS**  
Vertical spooler



**KEWSW**  
Coiler



**KEWS**  
Coiler



**KBB**  
Compacting unit



**KAZ**  
Take-up unit



**KAH**  
Take-up device



**KAH**  
Take-up device



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## What counts is the quality

### Comprehensive testing

The way KOCH single-block systems are designed and built is admired throughout the world. Achieving this requires strict quality testing. Monitoring the capstan geometry and the quality of surfaces ensures that the end product is of high quality, too. Tested drive equipment, pneumatics and hydraulics ensure that machine processes function reliably. Other important aspects of our machines – which we test under voltage – are their electronic installations and control cabinets. Machines do not leave our factory until all of their tools and apparatus are set up for the intended wire process.

### Always up to date

We are always developing ourselves and improving our processes, technologies and internal procedures. Because they are regularly trained, our engineers, machine builders, IT technicians and designers are kept permanently up to date with the very latest knowledge. Their expertise helps us to set technical and economic standards in the development of new products in the wire processing industry.





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## Comprehensive after-sales service

We will always be there at your side when you need us. If you have any questions about our single-block drawing systems in your production line, if you require help operating the machines, or if you need genuine spare and wearing parts that will keep your system functioning at its best, then call our Service Hotline, where we or our subsidiaries around the world will be ready to help you.

You will be actively assisted by a special contact person throughout the entire life cycle of your KOCH machine line. They will help you by using online diagnosis or by coming to your premises. In order to optimize your operational dependability, we can offer you custom solutions

for machine maintenance and preventative servicing. By constantly improving our support at an international level, we aspire to become true partners.

But KOCH takes things even further. Our aim is to offer new industry solutions by developing forward-looking and technically sophisticated applications. We can advise you comprehensively on production logistics and automation, information technology and other future technologies. And we can find solutions that help you achieve your aims and move forward in the market.





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