

A wide-angle photograph of an industrial facility, likely a refinery or chemical plant, at dusk. The scene is dominated by several tall smokestacks emitting thick plumes of dark smoke that drift across the sky. The facility itself is illuminated with numerous warm, yellow lights, creating a strong contrast with the cool tones of the twilight sky. In the foreground, a large body of water, possibly a harbor or a large storage tank, reflects the lights from the facility and the colors of the sky. The water's surface is calm, acting as a perfect mirror for the industrial scene above. The overall atmosphere is one of industrial activity and scale.

PIEPER

FULL-HD VIDEO INSPECTION SYSTEM

FOREWORD

SYSTEM SOLUTIONS

Your Security in Good Hands

50 years of experience, a highly qualified team and a high level of customer satisfaction is what PIEPER GmbH, which has its head office in Schwerte, stands for. We plan, develop, produce and install complete video, security and image processing systems for industry. Our portfolio also includes support operations and therefore the maintenance, repair and modernization of customized solutions. We are world-renowned for our combustion chamber systems, which monitor processes and furnaces in high-temperature environments at maximum resolution.

- Waste management
- Energy suppliers and power plants
- Glass production
- Public facilities
- Logistics and transport companies
- Passenger and freight transport
- Petrochemical industry
- Steel industry
- Cement processing

In this regard, our focus lies on combustion chamber video technology for visual process observation in temperature ranges of up to 2,400°C, in video and management systems for mass transportation and airports, as well as in industrial video solutions for production control.

We produce and install systems for digital image processing, communication and data technology, network technology, access control systems, building management solutions, and outdoor area security, plus all of the supplementary system components.

Since our company was established in 1968, we have offered our customers future-proof solutions. The fact that we are certified according to DIN EN ISO 9001 and SCC proves that we offer top quality. We are there for you all over Germany – in Berlin, Cottbus, Düsseldorf and Munich, as well as at our head office in Schwerte. Internationally, we are represented by partnerships and cooperative relationships in Brazil, Egypt, India, Indonesia, Italy, the People's Republic of China, Russia, Saudi Arabia, Turkey, Ukraine and the USA, to name but a few examples.

Hard- and Software

PIEPER GmbH has devoted its energies to video technology for half a century. We know the video security and process observation market better than almost any other company. We are therefore on hand to assist you as a reliable partner when it comes to individual recommendations, to which special camera, probe or software is best suited to your system, and to adapting both components and software exactly to your requirements.

We have been working closely with many suppliers for a number of years, including well-known manufacturers such as AG Neovo, Araani, AT – Automation Technology, AXIS Communication, Barco, barox Kommunikation, digivod, Hikvision, IndigoVision, Milestone Systems, Panasonic, Qognify and Senstar.

However, we do not supply you with individual solutions; what you get from us is complete systems. We help you to select the technologies and individually tailor each system to your needs – from planning to commissioning. Our very own R&D department at our head office in Schwerte develops special solutions.

SYSTEM

FUNCTIONALITY

Full-HD Video Inspection System

PIEPER's optical inspection system was primarily developed for the cold rolling industry and in particular for rolling, cutting and inspection machines, but can also be used to monitor other materials such as aluminum or copper.

Due to the modular design of the system, it is easy to maintain and can be individually adapted to the respective environment conditions. The system especially helpful when monitoring the underside of the strip, which otherwise could only be checked for errors with a considerable additional expenditure of personnel and time.

The video inspection system is designed for bandwidths between 700 and 1,400 mm.

State-of-the-art PLC technology is used to control the motors in the camera modules. This way, the integrated Full-HD special camera can be moved across the belt width.

The module monitoring the underside of the strip is also equipped with PLC controlled unwinding unit transporting a transparent film at fixed intervals which is preventing the view from being obstructed by dripping oil or dust

The dimmable LED strips attached to the module can also be controlled via the PLC, ensuring optimum illumination of the area to be monitored.

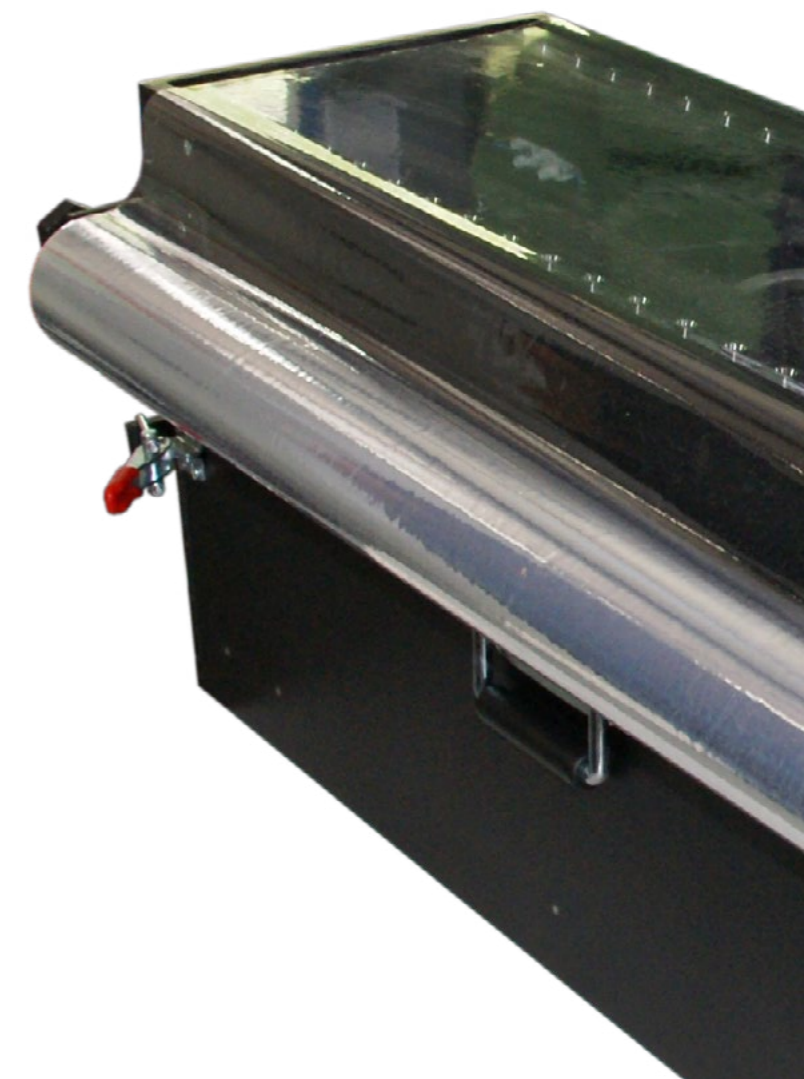
Optionally, the ONVIF-compatible full-HD video inspection system can also be integrated into an existing VMS.

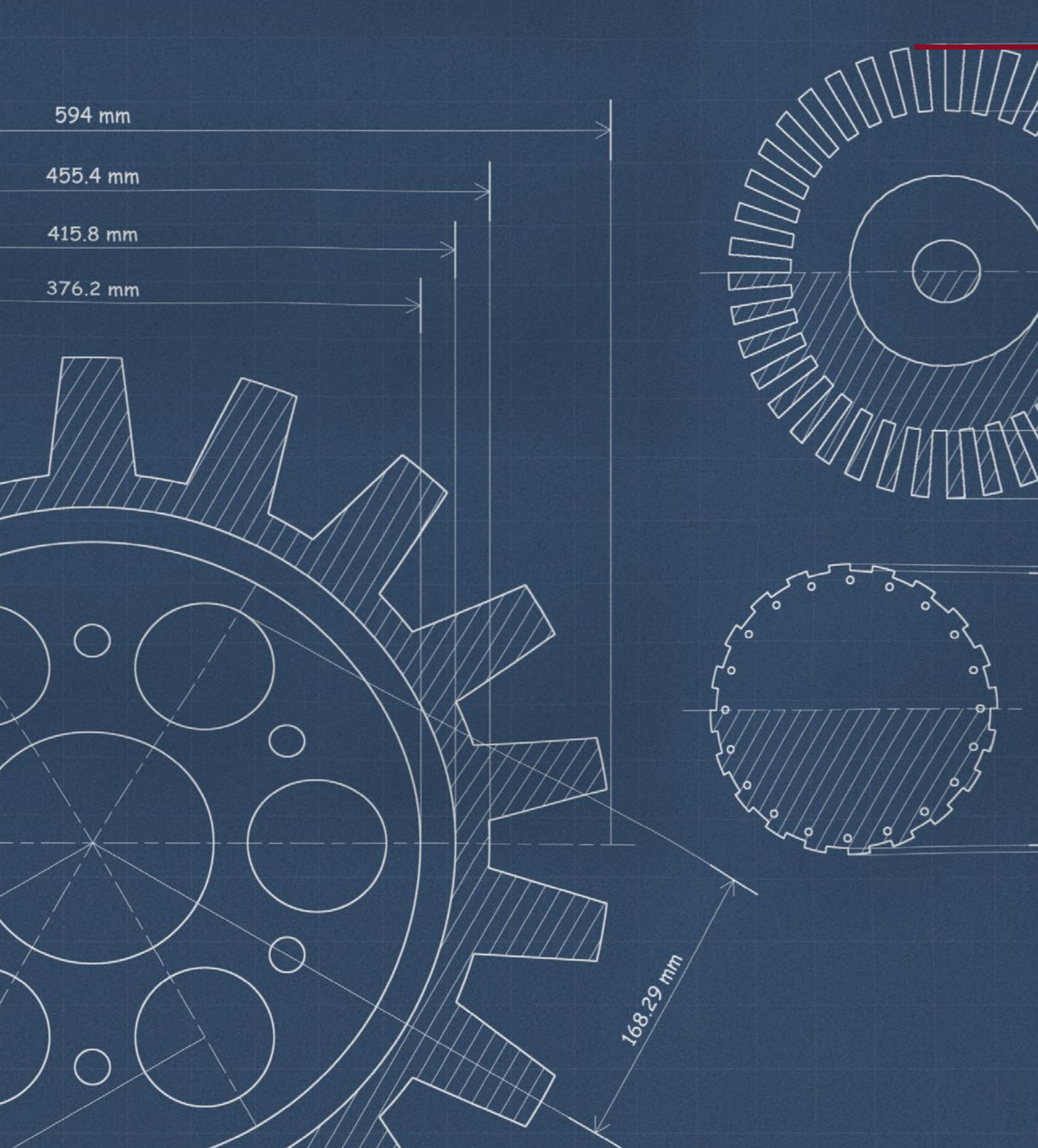
Thus, different scenarios for the control of the plant are possible:

- Automatic start/stop of recordings
- Automatic file naming and export to customer-side server
- Display overlay of the customer and/or coil number
- Automatic camera and light adjustments for different materials

Main Features

- Automatic adjustment of camera and light settings by trigger from the control system
- Image recording for quality verification and process optimization by means of coil/order number
- Compatible with IBA system
- Remote controllable and multi-user support
- Individual adaption to bandwidths and speed
- Upgradable by modular design





SYSTEM SPECIFICATIONS

Components

Control cabinet

Network recorder

- 4 TB 3,5" SATA HDD
- optimized for 24/7 operation
- Operating temperatur from 0° to +50°C
- 20 parallel recordings plus 20 simultaneous streams
- Recording and logging of alarms and events

Mini industrial PC

- Intel i5-7200U @ 3.2 GHz
- 8 GB DDR4 RAM

Managed PoE network switch

- optimized for 24/7 operation
- Copper ports: 8 x 10/100/1000TX; PoE+ 802.3 af/at
- Fibre optic ports: 2 x 100/1000, SFP
- 20 GBit/s backplane
- Integrated display (standard 22") incl. keyboard & mouse

Display

Camera system

1/2,8" network camera

- Sony CMOS sensor
- Megapixel lens, varifocal, motorized
- 2.8-12 mm focal length
- max. 2,048 x 1,536 px resolution
- 4x zoom
- ONVIF Profile S
- Operating temperature from 0° to +40°C
- Stainless steel housing
- Incl. motor, chassis, fan unit
- 2 alignable LED bars (lengthwise)
- lower module incl. film unwinding system

Camera control module

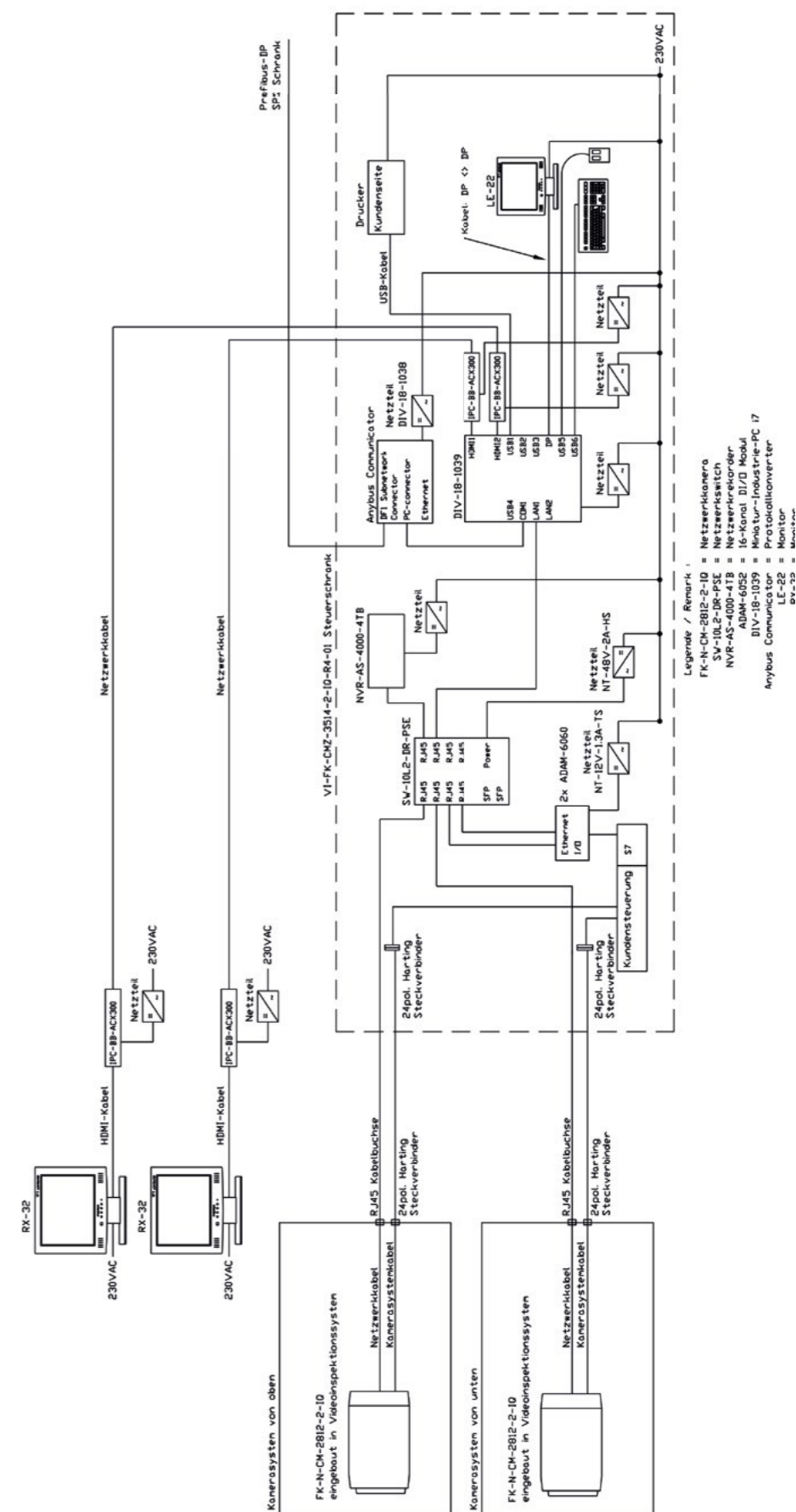
Displays

- 2 external displays





SCHEME



SUPPORT

OUR SERVICE

We see and make our complete solutions through our customers' eyes. So you can count on our team of technologically highly qualified employees providing a first-class, all-round service. This starts with precise knowledge of the market and regular personal contacts, and ends with satisfied customers and resulting long-term partnerships.

As a reliable partner, we plan, install and supervise your individual projects – worldwide.

We oversee the design stage and manage the construction supervision, in addition to carrying out the subsequent commissioning operations, to ensure that you benefit from a turnkey, promising system.

But we're also there for you at any time once assembly is complete. Our aftersales service supports you with spare parts logistics, maintenance and inspection operations, to name but a few examples.

If you have any questions, you will find your personal contact here:

head office

PIEPER GmbH
Binnerheide 33
58239 Schwerte
Tel.: +49 2304 4701-0
Fax: +49 2304 4701-77
Email: info@pieper-video.de

branch office Düsseldorf

PIEPER GmbH
Gumbertstr. 111
40229 Düsseldorf
Tel.: +49 211 2150-33
Fax: +49 211 2150-36
Email: info@pieper-video.de

branch office Berlin

PIEPER GmbH
Symeonstr. 6
12279 Berlin
Tel.: +49 30 722 52 99
Fax: +49 30 722 44 87
Email: info@pieper-video.de

branch office Cottbus

PIEPER GmbH
Calauer Str. 70
03048 Cottbus
Tel.: +49 355 430 903 40
Fax: +49 355 430 903 41
Email: info@pieper-video.de

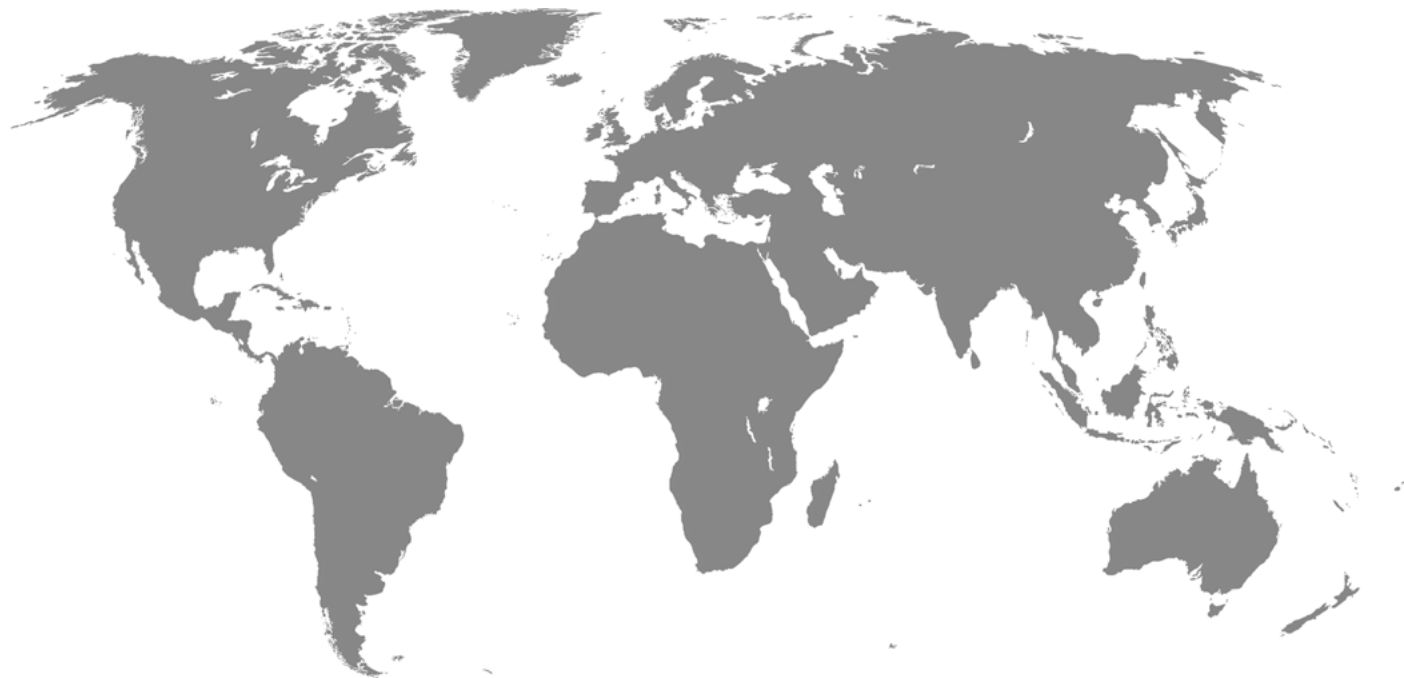
branch office München

PIEPER GmbH
Weidenweg 3
84434 Kirchberg
Tel.: +49 8706 949 77 97
Fax: +49 2304 4701-77
Email: info@pieper-video.de



Our team in Schwerte will be delighted to assist you with international inquiries!

PIEPER



PIEPER GmbH

Binnerheide 33
58239 Schwerte

T: +49 2304 4701-0
F: +49 2304 4701-77
info@pieper-video.de

[**www.pieper-video.de**](http://www.pieper-video.de)