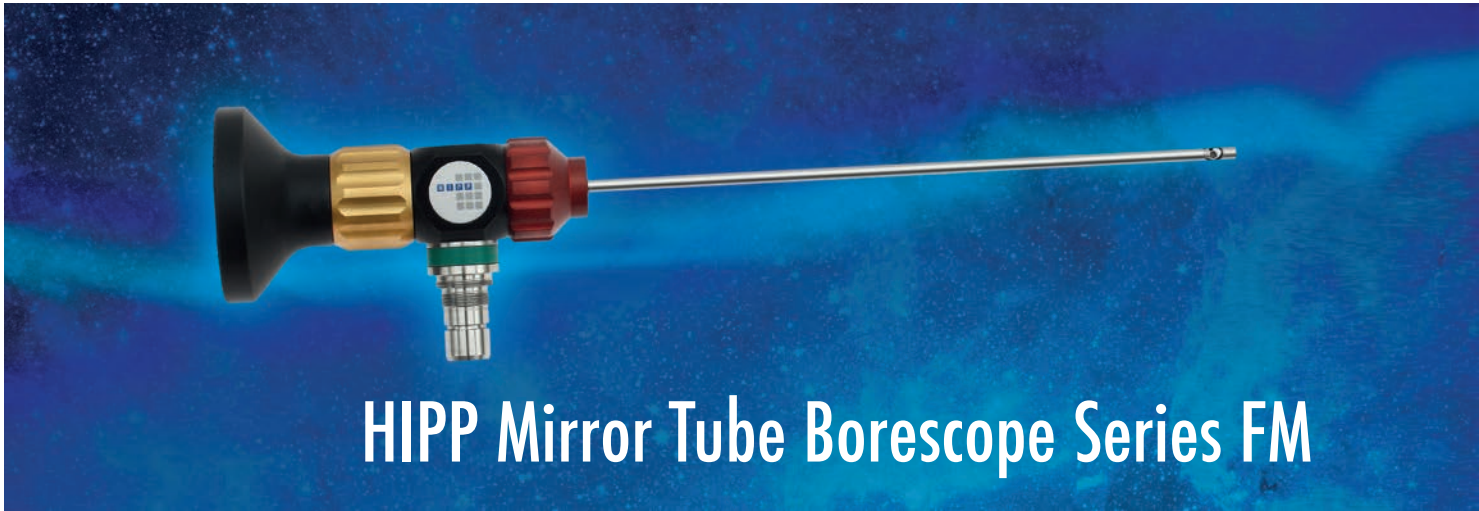


# HIPP Endoskop Service GmbH

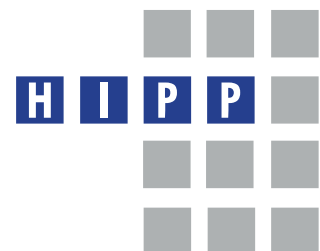
>> *your requirements are our aims.*



## HIPP Mirror Tube Borescope Series FM

Technical Product Information

MADE IN GERMANY



# HIPP Borescopes

>> *for industrial application.*



## ■ Our vision – giving the gift of time to our customers

The optimum orientation towards our customers with their needs and requirements constitutes a constant challenge for us to make a small but valuable contribution in facilitating their daily routine. Due to a service portfolio tailored to suit the specific needs of the market and compatibility with other well-known borescope manufacturers, HIPP has evolved into one of the leading companies in the field of industrial endoscopy. We might not be a leader in terms of company size or volumes of systems installed, but certainly we are a leader in manufacturing a well-selected product range of customized borescopes.

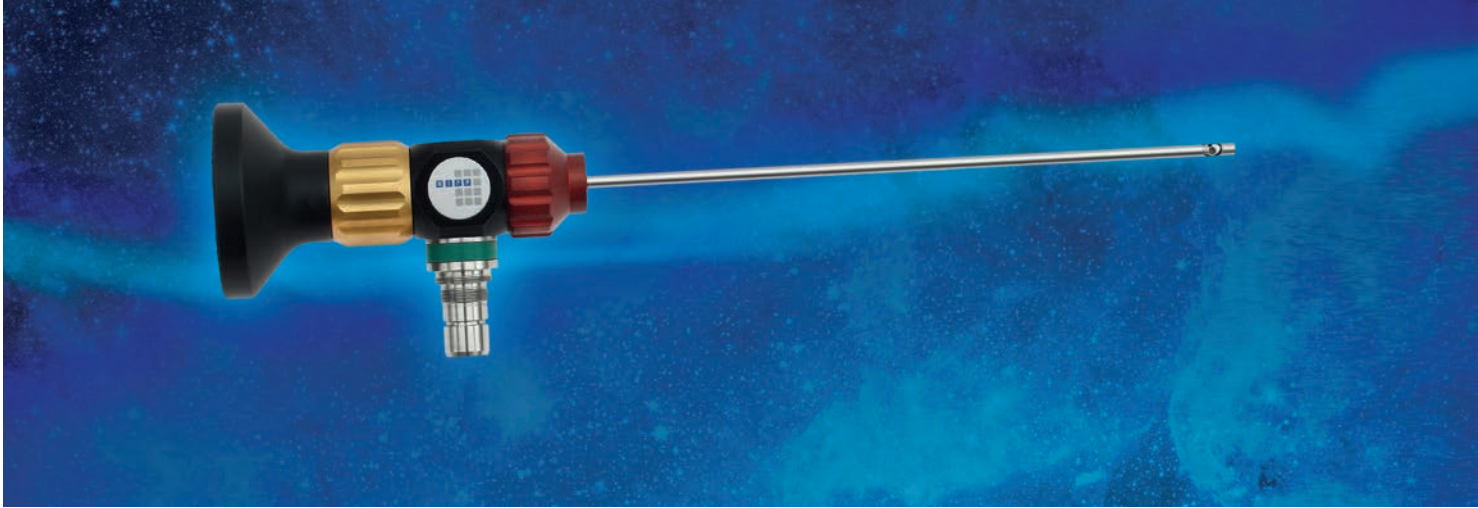
HIPP Endoskop Service GmbH was founded in July 1996 by Alexander and Frank Hipp. As integrated service providers and manufacturers we stand for traditional value structures. Our activities have always been focussed on the development, maintenance and manufacture of all types of industrial borescopes. Thanks to our extensive know-how along with the strong personal commitment of all our employees, creativity, team spirit as well as the stability and permanence of a family-owned business we guarantee the highest level of quality – “Made in Germany”.

## HIPP Service – customer orientation is our benchmark

Of course, customer care and after-sales service are our first priority. Spare parts supply is guaranteed for 10 years. Short repair times in the event of damage (14 days) as well as quick and uncomplicated processing are part of our standards.

# HIPP Mirror Tube Borescope Series FM

>> *without handle.*



■ HIPP Mirror Tube Borescope Series FM – maximum benefit due to high user-friendliness

HIPP Mirror Tube Borescopes Series FM are used in a wide range of industries covering various applications including:

## Plant Engineering

Testing of pipes / pipelines in the chemical, pharmaceutical and food industry

## Automotive

Testing of engines and engine parts such as valves, pistons and other wearing parts

## Steel and Aluminum Foundries

Visual inspection of passage channels, cross-holes as well as inner surfaces, sinter, sand and casting residues

## Machining Industry

Visual inspection of all inaccessible spots (drilling, blind holes, cross-holes, pocket holes, etc.) without component destruction

HIPP Mirror Tube Borescope Series FM are characterized by:

- Replaceable mirror tubes with different viewing directions (70°, 90°, 110°)
- Four different viewing directions with only one borescope, mirror tubes rotatable by 360°
- Application possible under extreme conditions, e.g. in liquids and at temperatures from - 10° C to + 80 °C
- Optimum image quality thanks to focussing in the close and far range
- Easy integration of HIPP Mirror Tube Borescopes into existing systems (DIN eye piece, ACMI light connection)
- The use of sapphire glass increases both the application spectrum and the lifetime
- Compliance with all requirements of digital image processing due to a high-resolution optical system
- Protection class IP 67 for the shank/mirror tube and IP 65 for all other borescope parts



# HIPP Mirror Tube Borescope Series FM

>> *features.*



## Product Profile

**FM** Rigid mirror tube borescope with replaceable mirror tubes, without handle. Variable working lengths and diameters are available. Labelling according to customer specifications (customer logo).  
Made from stainless steel – „Made in Germany“.



AVAILABLE MIRROR TUBE DIAMETER  
2.4 mm / 3.2 mm / 4.8 mm



APERTURE (FIELD OF VIEW)  
30° / 35°



LINE OF SIGHT (COLORED MARKING ON THE SHAFT)  
(70° / 90° / 110°)



FOCUSABLE 1 mm - ∞



USEFUL LENGTH (VARIES, DEPENDING ON THE PIPE DIAMETER)  
110 mm bis 300 mm

Mirror tubes (colored marking on the shaft)

Line of sight: 70°



Line of sight: 90°



Line of sight: 110°



## Note

HIPP Borescopes Series FM are infinitely focusable.  
The mirror tubes need to be ordered separately.

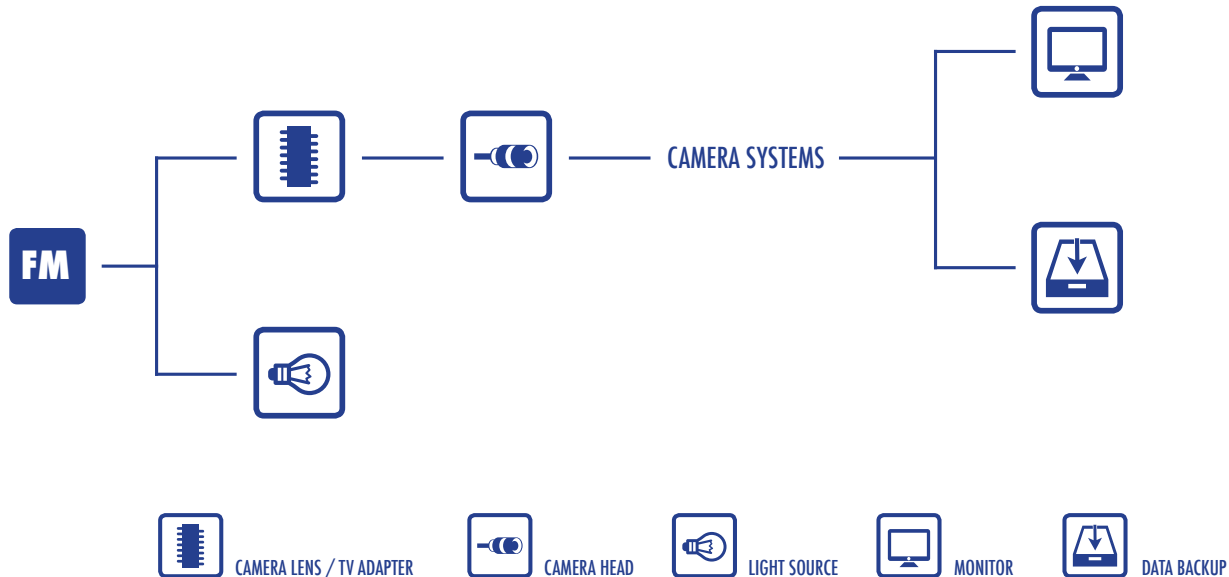
# HIPP Mirror Tube Borescope Series FM

>> modular system.



## Modular System

HIPP Mirror Tube Borescopes Series FM are compatible to various camera systems and light sources (sometimes also from other manufacturers).



## Accessories

Information about our wide range of accessories such as image processing systems (camera adapters, cameras, monitors), cold light sources and optical fibers as well as the compatibility with other manufacturers can be found in additional product informations.



# HIPP Mirror Tube Borescope Series FM

>> *configurator.*



## ■ Borescope-Configurator

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The HIPP Borescope-Configurator will assist you to choose the borescope you are interested in.

1. Please determine the mirror tube diameter. This should be much smaller than the hole:

2. Please specify the required effective length:

3. Please select your desired mirror tube sight directions (also multiple selection possible):

70°

90°

110°

Set

## ■ Note

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HIPP Mirror Tube Borescopes Series FM are infinitely focusable. The mirror tubes need to be ordered separately.

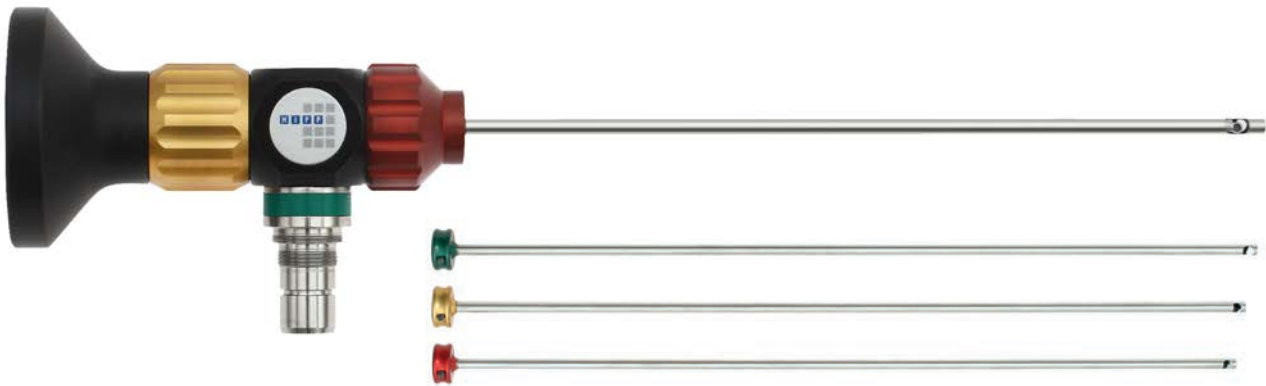


For more information, visit our website.



# HIPP Mirror Tube Borescope Series FM

>> variants overview.



## ■ Mirror Tube Diameter: 2.4 mm to 4.8 mm

Ø [mm] without / with mirror tube	Effective length [mm]	Viewing Direction	Aperture	Item-No.
1.9 / 2.4	110	0°	30°	HT-0110-19-FM-d
2.8 / 3.2	110	0°	30°	HT-0110-02-FM-d
2.8 / 3.2	175	0°	30°	HT-0175-02-FM-d
2.8 / 3.2	300	0°	30°	HT-0300-02-FM-d
4.0 / 4.8	175	0°	35°	HT-0175-04-FM-d
4.0 / 4.8	300	0°	35°	HT-0300-04-FM-d

## ■ Note

The mirror tubes need to be ordered separately.

Mirror tubes (colored marking on the shaft)

Line of sight: 70°



Line of sight: 90°



Line of sight: 110°



# HIPP Endoskop Service GmbH

>> *your requirements are our aims.*



## HIPP Mirror Tube Borescope Series FM

### Technical Product Information



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