

# HIPP Endoskop Service GmbH

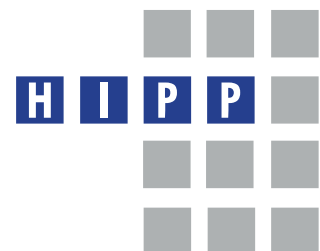
>> *your requirements are our aims.*



## HIPP 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.

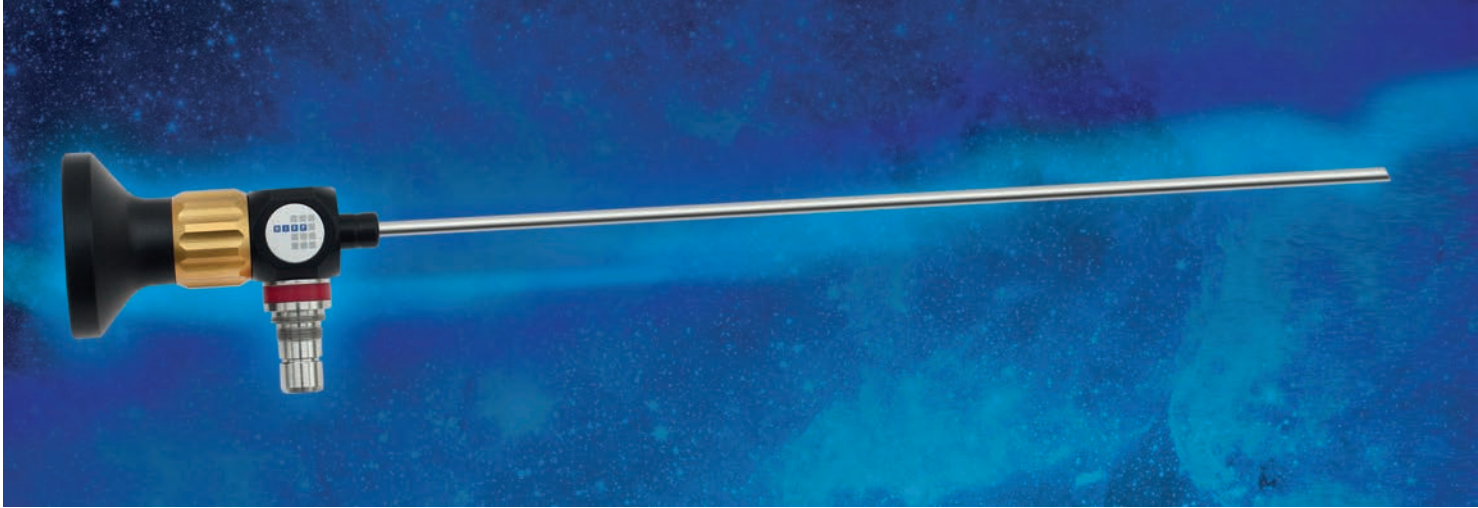
HIPP Endoskop Service GmbH was founded in July 1996 by Alexander and Frank Hipp. As integrated service providers and manufacturers we stand for traditional value structures. Our activities have always been focussed on the development, maintenance and manufacture of all types of industrial borescopes. 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 Borescope Series FM

>> *without handle, non-rotatable shank.*



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

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

### Plant Engineering

Testing of pipes, hydraulic lines, hydraulic cylinders, castings

### Automotive

Testing of cylinders, pistons and valves, inspection of gearboxes and bearings, turbochargers

### Aerospace

Turbine testing, crack testing (including UV)

### Mechanical Engineering

Quality control of drilling operations, surfaces / quality assurance, automatic test systems

### HIPP Borescopes Series FM are characterized by:

- Optimum image quality thanks to focussing in the close and far range as well as small outside diameters
- Easy integration of HIPP Borescopes into existing systems due to compatibility
- The use of sapphire glass increases both the application spectrum and the lifetime
- Suited for extreme conditions in liquids and at temperatures from - 10°C to + 100° C
- Compliance with all requirements of digital image processing due to a high-resolution optical system
- Protection class IP 67 for the shank tube and IP 65 for all other borescope parts
- Special variants with UV



# HIPP Borescope Series FM

>> *features.*



## Product Profile

**FM** Rigid borescope, without handle, with non-rotatable shank. Variable working lengths, diameters and viewing directions are available (special variants). Made from stainless steel – „Made in Germany“.



FOCUSABLE 1 mm -  $\infty$



LINE OF SIGHT (COLORED MARKING ON THE SHANK)  
(0° / 30° / 70°)



AVAILABLE SHANK DIAMETER  
1.9 mm / 2.8 mm / 4.0 mm / 6.0 mm



APERTURE (FIELD OF VIEW)  
70° / 80°



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



UV-LIGHT

## Optionen



(„g“)  
WOLF-ADAPTION



(„h“)  
FIX-FOCUS



(„i“)  
WIDE-ANGLE LENS



(„s“)  
PROTECTIVE SHANK

## Note

HIPP Borescopes Series FM have a standard aperture of 80 °. With a shank tube diameter of 1.9 mm, the aperture is 70 °. The option i = wide angle increases the aperture by 15 °. Matching protective shanks, according to the shank tube diameters, available.

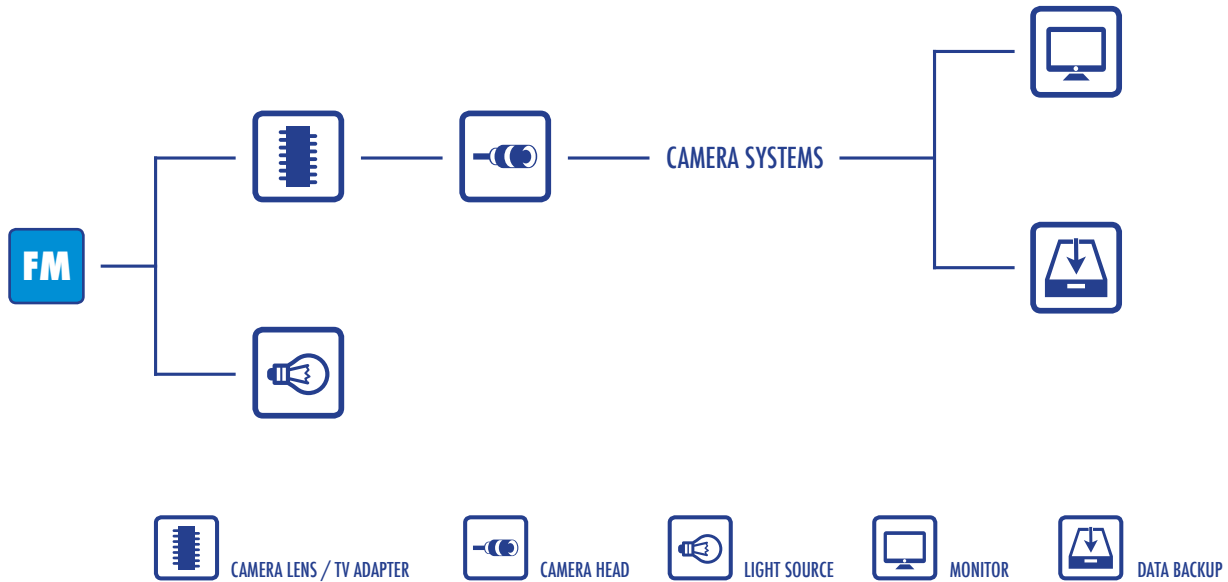
# HIPP Borescope Series FM

>> modular system.



## Modular System

HIPP Borescope 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 Borescope Series FM

>> *configurator.*

## ■ Borescope-Configurator

---

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

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

2. Please specify the required effective length:

3. Please choose the viewing direction you want: 0° / 30° / 70°:

4. Please select your desired options:

Wolf-Adaption ("g")

Fix-Focus-Optic ("h")

Protective Shank ("s")

## ■ Note

---

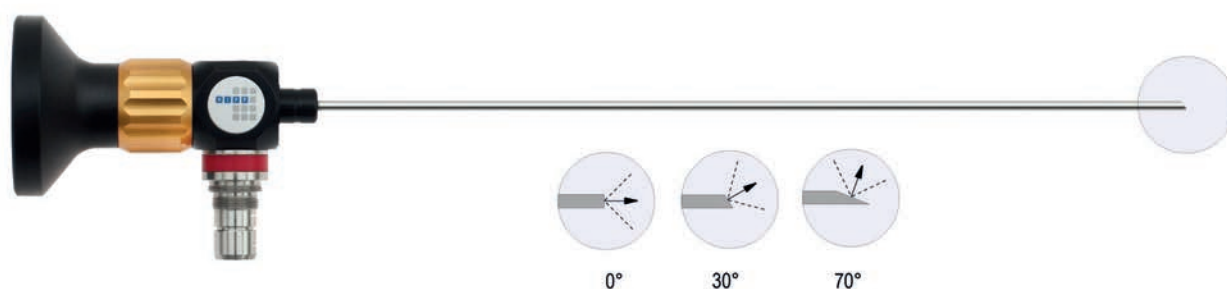
HIPP Borescopes Series FM have a standard aperture of 80 °. With a shank tube diameter of 1.9 mm, the aperture is 70 °. The option i = wide angle increases the aperture by 15 °. Matching protective shanks, according to the shank tube diameters, available.



For more information, visit our website.

# HIPP Borescope Series FM

>> variants overview.



## Shank Tube Diameter: 1.65 mm to 1.8 mm

Ø [mm]	Effective length [mm]	Viewing Direction	Aperture	Options	Item-No.
1.65	70	30°	55°	s	HT-3070-16-FM
1.8	104	0°	70°	- g, - h, - s	HT-0110-18-FM
1.8	150	30°	70°	h, - s	HT-3150-18-FM

## Shank Tube Diameter: 1.9 mm to 2.8 mm

Ø [mm]	Effective length [mm]	Viewing Direction	Aperture	Options	Item-No.
1.9	110	0°	70°	- g, - h, - s	HT-0110-19-FM
1.9	110	30°	70°	- g, - h, - s	HT-3110-19-FM
2.8	110	0°	80°	- g, - h, - s	HT-0110-02-FM
2.8	110	30°	80°	- g, - h, - s	HT-3110-02-FM
2.8	110	70°	80°	- g, - h, - s	HT-7110-02-FM
2.8	141	0°	80°	- g, - h, - s	HT-0140-02-FM
2.8	141	30°	80°	- g, - h, - s	HT-3140-02-FM
2.8	141	70°	80°	- g, - h, - s	HT-7140-02-FM
2.8	175	0°	80°	- g, - h, - s	HT-0175-02-FM
2.8	175	30°	80°	- g, - h, - s	HT-3175-02-FM
2.8	175	70°	80°	- g, - h, - s	HT-7175-02-FM
2.8	300	0°	80°	- g, - h, - s	HT-0300-02-FM
2.8	300	30°	80°	- g, - h, - s	HT-3300-02-FM
2.8	300	70°	80°	- g, - h, - s	HT-7300-02-FM

Please note the following options for HIPP Borescopes Series FM.

### Options





# HIPP Borescope Series FM

>> *variants overview.*

Shank Tube Diameter: 4.0 mm to 6.0 mm

Ø [mm]	Effective length [mm]	Viewing Direction	Aperture	Options	Item-No.
4.0	110	0°	80°	- g, - h, - i, - s	HT-0110-04-FM
4.0	110	30°	80°	- g, - h, - i, - s	HT-3110-04-FM
4.0	110	70°	80°	- g, - h, - i, - s	HT-7110-04-FM
4.0	175	0°	80°	- g, - h, - i, - s	HT-0175-04-FM
4.0	175	30°	80°	- g, - h, - i, - s	HT-3175-04-FM
4.0	175	70°	80°	- g, - h, - i, - s	HT-7175-04-FM
4.0	300	0°	80°	- g, - h, - i, - s	HT-0300-04-FM
4.0	300	30°	80°	- g, - h, - i, - s	HT-3300-04-FM
4.0	300	70°	80°	- g, - h, - i, - s	HT-7300-04-FM
6.0	110	0°	80°	- g, - h, - i, - s	HT-0110-06-FM
6.0	110	30°	80°	- g, - h, - i, - s	HT-3110-06-FM
6.0	110	70°	80°	- g, - h, - i, - s	HT-7110-06-FM
6.0	175	0°	80°	- g, - h, - i, - s	HT-0175-06-FM
6.0	175	30°	80°	- g, - h, - i, - s	HT-3175-06-FM
6.0	175	70°	80°	- g, - h, - i, - s	HT-7175-06-FM
6.0	300	0°	80°	- g, - h, - i, - s	HT-0300-06-FM
6.0	300	30°	80°	- g, - h, - i, - s	HT-3300-06-FM
6.0	300	70°	80°	- g, - h, - i, - s	HT-7300-06-FM
6.0	450	0°	80°	- g, - h, - i, - s	HT-0450-06-FM

Please note the following options for HIPP Borescopes Series FM.

## Options



("g")  
WOLF-ADAPTION



("h")  
FIX-FOCUS



("i")  
WIDE-ANGLE LENS



("s")  
PROTECTIVE SHANK



# HIPP Borescope Series FM

>> *variants overview.*

## ■ UV-variants with non-rotatable shank

Ø [mm]	Effective length [mm]	Viewing Direction	Aperture	Item-No.
4.0	175	30°	70°	HT-3175-04-FM-e
4.0	175	70°	70°	HT-7175-04-FM-e

Options for UV variants not available.



# HIPP Borescope Series FM

>> *your notes.*

Your Notes

---

# HIPP Borescope Series FM

>> *your notes.*

Your Notes

---



# HIPP Endoskop Service GmbH

>> *your requirements are our aims.*



## HIPP Borescope Series FM

### Technical Product Information



HIPP Endoskop Service GmbH  
Glottertalstrasse 10  
79108 Freiburg / Germany  
Telephone: +49 (0) 761 / 52800  
Telefax: +49 (0) 761 / 52855  
E-Mail: [info@hipp-es.com](mailto:info@hipp-es.com)  
Internet: [www.hipp-es.com](http://www.hipp-es.com)

