

HIPP Endoskop Service GmbH

>> *your requirements are our aims.*

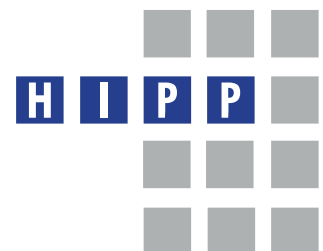


HIPP Borescope Series FM

non-rotatable boroscope shaft

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.

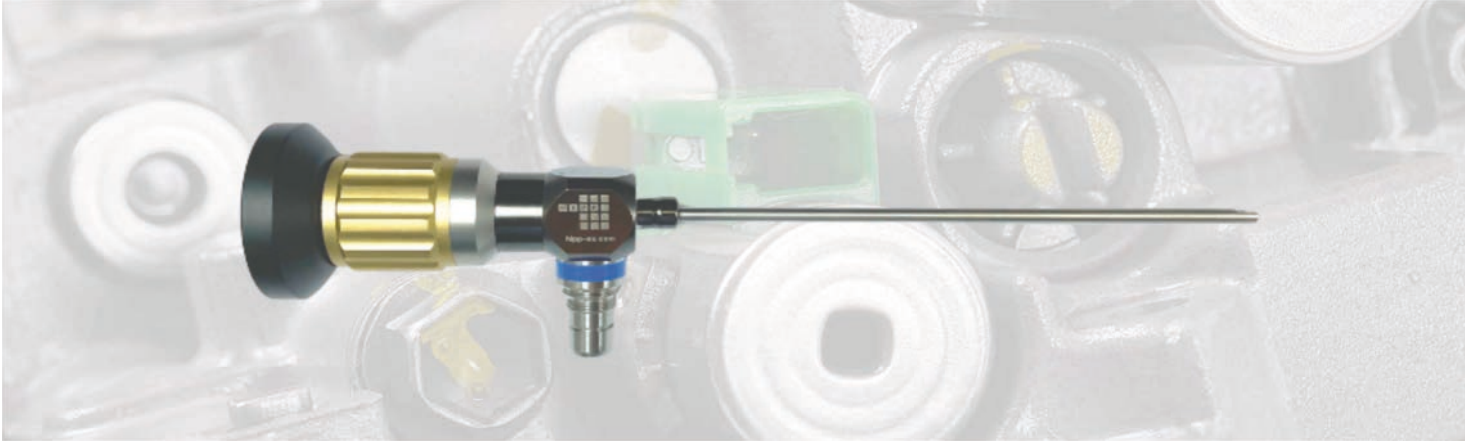
Hipp Endoskop Service GmbH was founded in July 1996 by Alexander and Frank Hipp. As integrated service providers and manufacturers we stand for traditional value structures. Our activities have always been focussed on the development, maintenance and manufacture of all types of industrial borescopes.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

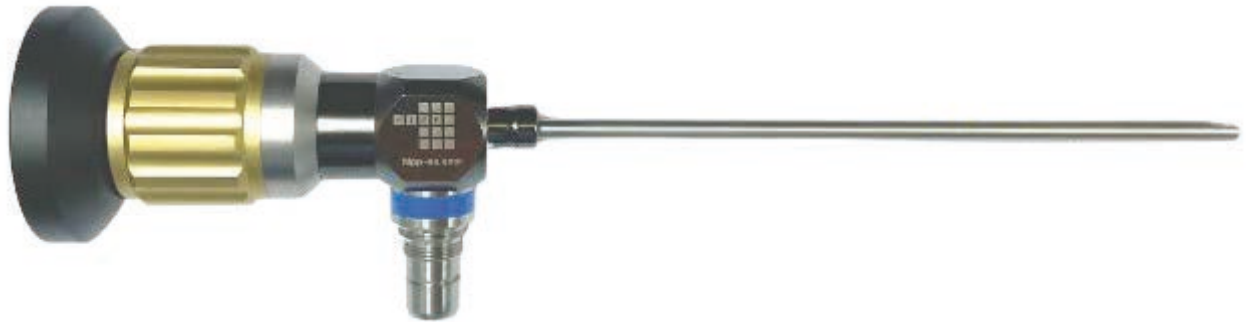
HIPP Borescopes Series FM are characterized by:

- 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 Profil

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“.



focus range from 1mm to infinity



different view directions 0° /30° /70° /90°



available shaft Diameter
1,6mm/1,8mm/1,9mm/2,4mm/2,8mm/3,8mm/4,5mm/6mm



different opening angles (FIELD OF VIEW)
70° /80° /100°



available endoscope lengths
50mm to 656 mm



UV-LIGHT

Optionen



(„h“)
FIX-FOCUS



(„i“)
WIDE-ANGLE LENS



(„s“)
PROTECTIVE SHAFT

note

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

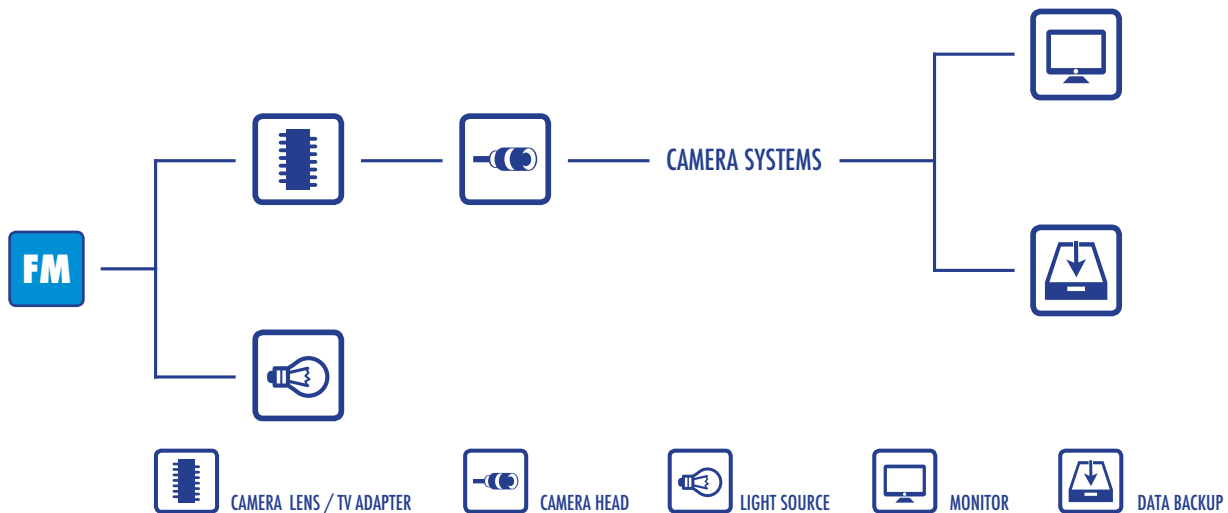
HIPP Borescope Series FM

>> modular system.



Modular System

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



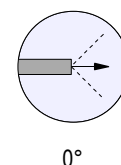
Accessories

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

>> variants overview.



■ Direction of view 0° / Shaft tube diameter: 1,65mm to 4,5mm

Ø [mm]	Direction of view	shaft length[mm]	Opening angel	Options	Article-No.
1,6	0°	105	70°	- h, - i, - s	HT-0100-16-FM
1,6	0°	165	70°	- h, - i, - s	HT-0170-16-FM
1,8	0°	105	80°	- h, - i, - s	HT-0110-18-FM
1,9	0°	105	80°	- h, - i, - s	HT-0110-19-FM
2,4	0°	105	80°	- h, - i, - s	HT-0110-24-FM
2,8	0°	105	80°	- h, - i, - s	HT-0110-02-FM
2,8	0°	140	80°	- h, - i, - s	HT-0140-02-FM
2,8	0°	170	80°	- h, - i, - s	HT-0175-02-FM
2,8	0°	298	80°	- h, - i, - s	HT-0300-02-FM
3,8	0°	105	80°	- h, - i, - s	HT-0110-38-FM
3,8	0°	170	80°	- h, - i, - s	HT-0175-38-FM
3,8	0°	295	80°	- h, - i, - s	HT-0300-38-FM
4,5	0°	656	80°	- h, - i, - s	HT-0656-45-FM
4,8	0°	750	80°	- h, - i, - s	HT-0750-48-FM
6,0	0°	170	80°	- h, - i, - s	HT-0175-06-FM
6,0	0°	298	80°	- h, - i, - s	HT-0300-06-FM
6,0	0°	450	80°	- h, - i, - s	HT-0450-06-FM

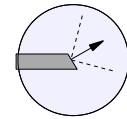
Please note the following options for HIPP Borescopes Series FM.

Options



HIPP Borescope Series FM

>> variants overview.



30°

■ Direction of view 30° / Shaft tube diameter: 1,65mm to 4,5mm

Ø [mm]	Direction of view	shaft length[mm]	Opening angel	Options	Article-No.
1,65 on request	30°	70	80°	- h, - i, - s	HT-3070-16-FM
1,65 on request	30°	100	80°	- h, - i, - s	HT-3100-16-FM
1,8 on request	30°	170	80°	- h, - i, - s	HT-3170-18-FM
1,9	30°	105	80°	- h, - i, - s	HT-3110-19-FM
2,8	30°	100	80°	- h, - i, - s	HT-3110-02-FM
2,8	30°	140	80°	- h, - i, - s	HT-3140-02-FM
2,8	30°	170	80°	- h, - i, - s	HT-3175-02-FM
2,8	30°	298	80°	- h, - i, - s	HT-3300-02-FM
3,8 on request	30°	110	80°	- h, - i, - s	HT-3110-38-FM
3,8	30°	170	80°	- h, - i, - s	HT-3175-38-FM
3,8	30°	298	80°	- h, - i, - s	HT-3300-38-FM
6,0 on request	30°	110	80°	- h, - i, - s	HT-3110-06-FM
6,0	30°	170	80°	- h, - i, - s	HT-3175-06-FM
6,0	30°	298	80°	- h, - i, - s	HT-3300-06-FM

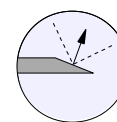
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Options



HIPP Borescope Series FM

>> variants overview.



70°

■ Direction of view 70° / Shaft tube diameter: 2,4mm to 4,5mm

Ø [mm]	Direction of view	shaft length[mm]	Opening angel	Options	Article-No.
2,4 on request	70°	60	80°	- h, - i, - s	HT-7060-24-FM
2,4	70°	105	80°	- h, - i, - s	HT-7110-24-FM
2,8	70°	107	80°	- h, - i, - s	HT-7110-02-FM
2,8	70°	145	80°	- h, - i, - s	HT-7140-02-FM
2,8	70°	170	80°	- h, - i, - s	HT-7175-02-FM
2,8	70°	300	80°	- h, - i, - s	HT-7300-02-FM
3,8 on request	70°	110	80°	- h, - i, - s	HT-7110-38-FM
3,8	70°	175	80°	- h, - i, - s	HT-7175-38-FM
3,8	70°	300	80°	- h, - i, - s	HT-7300-38-FM
4,5	70°	656	80°	- h, - i, - s	HT-7656-45-FM
6,0 on request	70°	110	80°	- h, - i, - s	HT-7110-06-FM
6,0	70°	175	80°	- h, - i, - s	HT-7175-06-FM
6,0	70°	300	80°	- h, - i, - s	HT-7300-06-FM

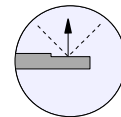
Please note the following options for HIPP Borescopes Series FM.

Options



HIPP Borescope Series FM

>> variants overview.



90°

■ Direction of view 90° / Shaft tube diameter: 2,9 mm to 4,3 mm

Ø [mm]	Direction of view	shaft length[mm]	Opening angel	Options	Article-No.
2,9	90°	102	80°	- h, - i, - s	HT-9100-02-FM
2,9	90°	163	80°	- h, - i, - s	HT-9163-02-FM
2,9	90°	293	80°	- h, - i, - s	HT-9260-02-FM
3,8	90°	170	80°	- h, - i, - s	HT-9170-38-FM
3,8	90°	246	80°	- h, - i, - s	HT-9246-38-FM
3,8	90°	297	80°	- h, - i, - s	HT-9280-38-FM
4,3	90°	440	80°	- h, - i, - s	HT-9440-43-FM
4,3	90°	645	80°	- h, - i, - s	HT-9645-43-FM

Please note the following options for HIPP Borescopes Series FM.

Options



(, h ")
FIX-FOCUS



+15°
(, i ")
WIDE-ANGEL LENS



(, s ")
PROTECTIVE SHAFT

HIPP Endoskop Service GmbH

>> *your requirements are our aims.*



Your partner in industrial endoscopy.

Hipp Endoskop Service GmbH is certified to DIN EN ISO 9001:2015

Certificate registration-No. 20100213013252

Online Verification



www.tuv.at/certcheck



TÜV
AUSTRIA



Hipp Endoskop Service GmbH

Glottertalstrasse 10

79108 Freiburg / Germany

Telefon: +49 (0) 761 / 52800

Telefax: +49 (0) 761 / 52855

E-Mail: info@hipp-es.com

internet: www.hipp-es.com

