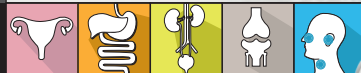


TONTARRA

ENDOSCOPY



TELESCOPES FOR RIGID ENDOSCOPY

Featuring a new generation of optics:

► HD+ ► HD+2 ► HD+4

TONTARRA – Telescopes with the **PLUS**.

ABOUT US

For more than 50 years “made by TONTARRA, Germany” is a synonym for state-of-the-art surgical and endoscopic instruments and equipment.

This success and the international recognition of the skillfulness in surgical and endoscopic instrument making of Tontarra Medizintechnik GmbH are based on our commitment to medical innovation, mastery in manufacturing, and a strong focus on our continuing tradition of excellence.

The confidence in our surgical and endoscopic lines as expressed by our international customers, distribution- and OEM-partners are a driving force to face and meet new challenges.

TONTARRA



Indispensable ‘tools’ for maturing new ideas into high-precision surgical instruments of highest precision include our state-of-the-art manufacturing facility and production processes, and especially the comprehensive technical know-how, ingenuity and strong commitment of our entire team.

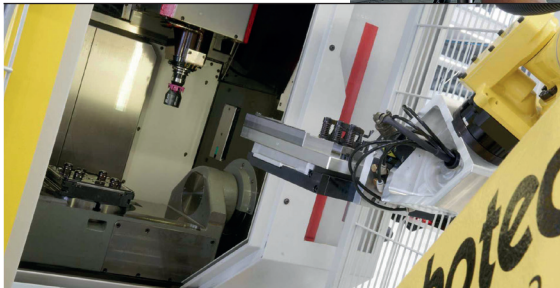
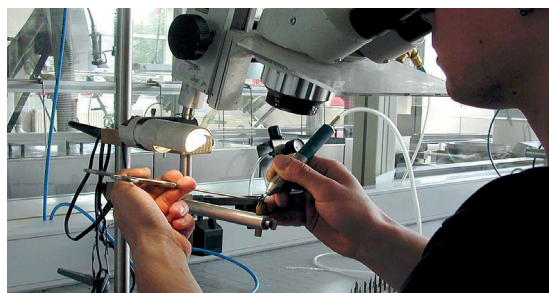


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A NEW GENERATION OF OPTICS

Our proven-quality HD telescope program has been notably extended. The TONTARRA telescope portfolio now features not only more models but a new generation of optics:

TONTARRA HD+, HD+2, HD+4.

The Telescopes with the PLUS.

- ▶ Matching State-of-the-Art imaging systems of today + tomorrow
TONTARRA features optical systems of different HD levels (HD, HD+, HD+2, HD+4), all of them matching the performance characteristics of contemporary HD camera systems.

The different levels reflect the varying requirements of our different clients – a PhD performing surgeries in an office setting has other needs than surgeons operating in clinics with hybrid operation theatre or tele-surgery.

	HD	HD+	HD+2	HD+4
Resolution in center	++	+++	++++	++++
Resolution from center to edge	+	+++	++++	+++++
Brightness	++	+++	++++	++++
Color rendering	++	+++	++++	++++
Contrast/MTF	+	+++	++++	+++++
Depth of field	++	+++	++++	++++
Modified for 4k imaging systems	No	No	No	Yes

- ▶ TONTARRA HD & HD+

All TONTARRA telescopes provide an excellent quality; a few of them are currently only available in HD quality. Imaging systems supporting our HD and HD+ telescopes will still prevail during the next couple of years in smaller clinics in several areas of the world.

TONTARRA's recommendation of use:

- ▶ HD for SD & 1st generation HD imaging Systems
- ▶ HD+ for SD & 2nd generation HD imaging Systems

- ▶ TONTARRA HD+2 & HD+4 TELESCOPES: The future is today

The fast pace of development in the field of optical imaging sometimes puts purchasers in a difficult spot: Will the telescope acquired today support the latest technologic advances of innovative optical systems?

Hi-tech hybrid surgical theatres equipped with the most advanced medical imaging devices are on the rise; the TONTARRA HD2+ and HD+4 telescopes with its completely new visualization characteristics pertain to the latest generation of high definition optics and match both, current state-of-the-art and future camera systems.

In view of the new and rapid developments in imaging techniques, our HD2+ & HD+4 generations already feature characteristics, which will be incorporated as standard of tomorrow's imaging systems.

TONTARRA's recommendation of use:

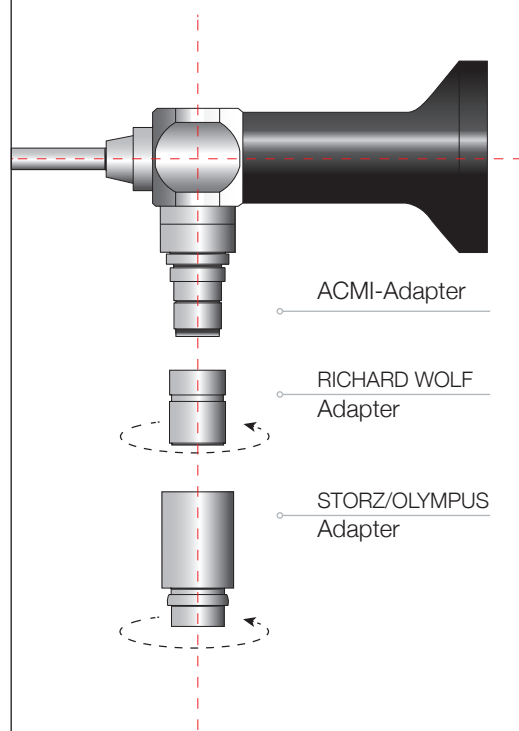
- ▶ HD+2 for 2nd generation & full HD imaging Systems
- ▶ HD+4 for 4k imaging systems

▶ HD

▶ HD+

▶ HD+2

▶ HD+4



W.O.M./LEMKE Vision

THE TONTARRA TELESCOPES WITH THE **PLUS**

The output of the best and most modern imaging system can be only as good as its single components.



HD+

HD+2

HD+4

► **The lens:** The first link in the chain of the visualization process

A good beginning makes a good ending – The importance of the lens quality is often underestimated; a supreme quality is required for the use with high-end imaging systems. On the other hand, resolution and contrast of a standard imaging system can be enhanced with a high quality lens.

► **Cutting Edge Optical technology**

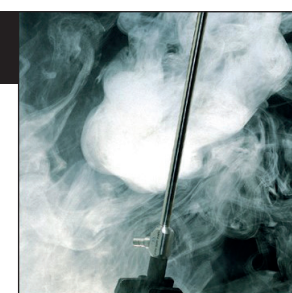
- Exceptional brightness by refined light input through specially aligned quality glass cones
- Extraordinary brilliant, high-contrast images even around the edges result from an accurate centering of optical and mechanical components and the use of best quality illumination fibres
- Scratch resistant and extremely durable Sapphires at the distal and proximal end
- Optimum color rendering even under high magnification thanks to highly refractive glass
- Lens calculation, lens manufacturing and assembly within Germany
- Outstanding optical transmission thanks to specially designed and individually adjusted lens systems
- Anti-reflective, multi-coated optical system

► **Telescope body:** Stainless steel. Ultra-high durability. Outstanding autoclavability, spotless hygiene.

- Masterful sealing technology:
 - elaborated laser welding process in which all leakage paths are laser welded or soldered
 - no use of adhesives nor o-rings
- Triple tube design of outer, inner and optic tube (Fibre optic channel and lens channel are separate, each of them is hermetically sealed). The triple tube design warrants unique bending resistance, protects the rod lenses and reduces lens cracking.



TONTARRA HD+ HD2+ HD4+ telescopes for superb imaging results



TONTARRA HD+ HD2+ HD4+ telescopes are French Cycle validated (134°C, 18 min)

OVERVIEW: THE TONTARRA TELESCOPES WITH THE PLUS

► HD+

► HD+2

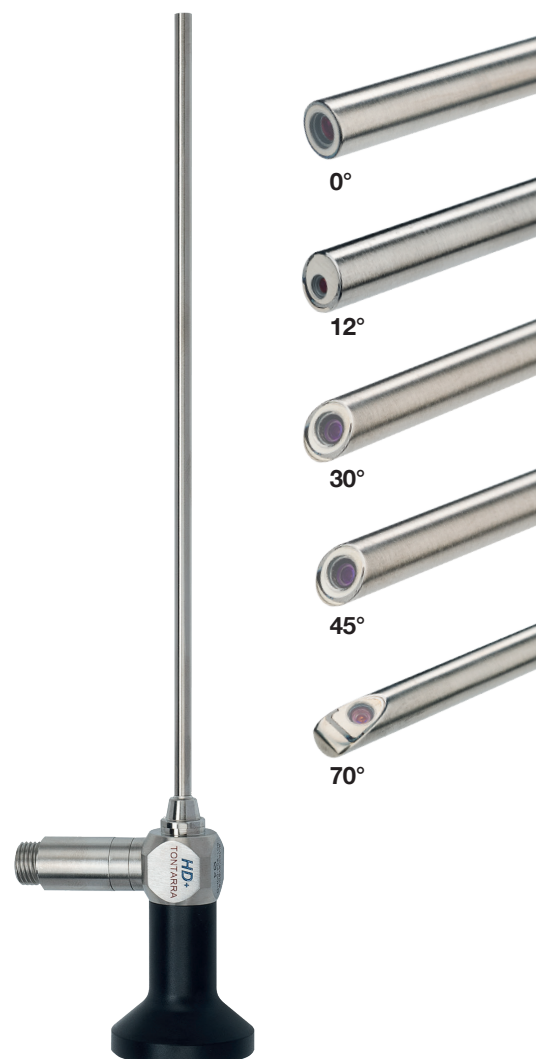
► HD+4

TONTARRA's RECOMMENDATION OF USE

			HD+	HD+2	HD+4
Telescopes with different HD levels			For SD & 2nd generation HD imaging Systems	for 2nd generation & full HD imaging Systems	for 4k imaging systems
LAPAROSCOPES HD			HD+	HD+2	HD+4
	► Ø 10,0 mm	0°	601-010-00HD	601-010-00HD2	601-010-00HD4
	► FL 330 mm	30°	601-010-30HD	601-010-30HD2	601-010-30HD4
		45°	601-010-40HD	601-010-40HD2	601-010-40HD4
	► Ø 10,0 mm	0°	601-012-00HD		
	► FL 450 mm	30°	601-012-30HD		
LAPAROSCOPES HD					
	► Ø 5,5 mm	0°		601-005-00HD2	601-005-00HD4
	► FL 300 mm	30°		601-005-30HD2	601-005-30HD4
		45°		601-005-40HD2	601-005-40HD4
LAPAROSCOPES HD					
	► Ø 5,0 mm	0°	601-005-00HD		
	► FL 300 mm	30°	601-005-30HD		
		45°	601-005-40HD		
TELESCOPES HD FOR HYSTEROSCOPY, CYSTEROSCOPY, LAPAROSCOPY					
	► Ø 2,9 mm	0°		601-103-00HD2	
	► FL 300 mm	12°		601-103-12HD2	
		30°		601-103-30HD2	
CYSTOSCOPES HD					
	► Ø 4,0 mm	0°	601-104-00HD	601-104-00HD2	
	► FL 300 mm	12°	601-104-12HD	601-104-12HD2	
		30°	601-104-30HD	601-104-30HD2	
		70°	601-104-70HD	601-104-70HD2	
HYSTEROSCOPE HD					
	► Ø 4,0 mm	0°	601-114-00HD	601-114-00HD2	
	► FL 300 mm	12°	601-114-12HD	601-114-12HD2	
		30°	601-114-30HD	601-114-30HD2	
		70°	601-114-70HD	601-114-70HD2	
ARTHROSCOPES/SINUSCOPES HD					
	► Ø 4,0 mm	0°	601-204-00HD	601-204-00HD2	
	► FL 175 mm	30°	601-204-30HD	601-204-30HD2	
		45°	601-204-40HD	601-204-40HD2	
		70°	601-204-70HD	601-204-70HD2	
ARTHROSCOPES/SINUSCOPES HD					
	► Ø 2,7 mm	0°	601-203-00HD		
	► FL 175 mm	30°	601-203-30HD		
		70°	601-203-70HD		
ARTHROSCOPES/SINUSCOPES HD					
	► Ø 2,7 mm	0°	601-201-00HD		
	► FL 140 mm	30°	601-201-30HD		
		70°	601-201-70HD		
ARTHROSCOPES/OTOSCOPES HD					
	► Ø 1,9 mm	0°	601-122-00HD		
	► FL 60 mm	30°	601-122-30HD		

The new optical technologies behind the HD+2 and HD+4 telescopes will be standard of tomorrow's imaging systems, featuring:

- A nearly constant resolution from center to edge
- More depth of field for minimal refocusing
- Even superior contrast for better detail recognition
- Nearly 3-dimensional image (HD+4)



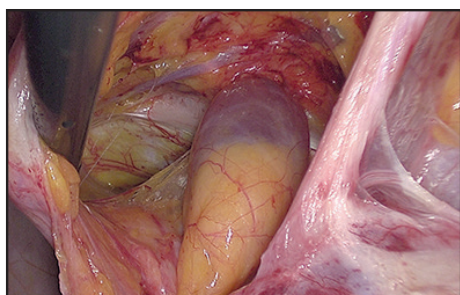
Function Length **FL**



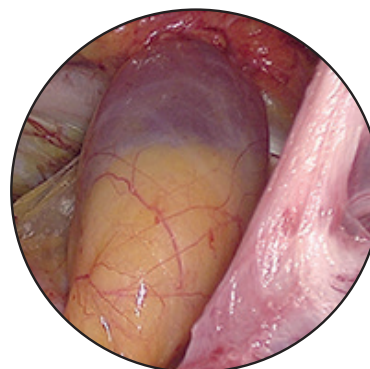
LAPAROSCOPY TELESCOPES HD+, HD+2, HD+4

- ▶ Ø 5,5 mm / Ø 10,0 mm
- ▶ Compatible with most instrument- and camera systems

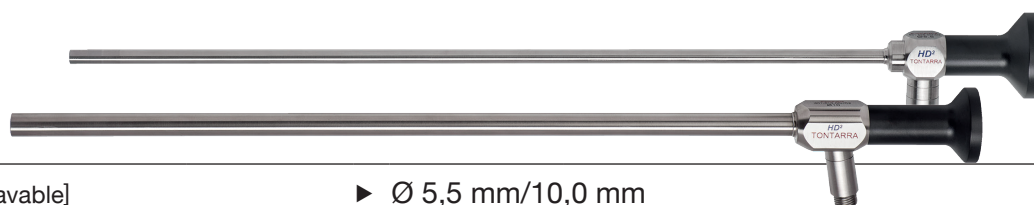
Our laparoscopes with their different sizes, viewing directions and compatibility with different instrument- and camera systems cover nearly the entire range of possible minimal-invasive abdominal surgeries.



W.O.M./LEMKO Vision



Excellent detail recognition – for secure laparoscopic diagnostic and therapeutic interventions.



LAPAROSCOPES [autoclavable]

▶ Ø 5,5 mm/10,0 mm

Description				Art. No.	Standard equipment for each operating theatre: laparoscopes of Ø 10 mm 0° and 30°, and Ø 5 mm 30° telescopes.
Laparoscope HD+	▶ Ø 5,0 mm; 0°	FL 300 mm		601-005-00HD	
Laparoscope HD+2	▶ Ø 5,5 mm; 0°	FL 300 mm		601-005-00HD2	
Laparoscope HD+4	▶ Ø 5,5 mm; 0°	FL 300 mm		601-005-00HD4	
Laparoscope HD+	▶ Ø 5,0 mm; 30°	FL 300 mm		601-005-30HD	
Laparoscope HD+2	▶ Ø 5,5 mm; 30°	FL 300 mm		601-005-30HD2	
Laparoscope HD+4	▶ Ø 5,5 mm; 30°	FL 300 mm		601-005-30HD4	
Laparoscope HD+	▶ Ø 5,0 mm; 45°	FL 300 mm		601-005-40HD	
Laparoscope HD+2	▶ Ø 5,5 mm; 45°	FL 300 mm		601-005-40HD2	
Laparoscope HD+4	▶ Ø 5,5 mm; 45°	FL 300 mm		601-005-40HD4	
Laparoscope HD+	▶ Ø 10,0 mm; 0°	FL 330 mm		601-010-00HD	
Laparoscope HD+2	▶ Ø 10,0 mm; 0°	FL 330 mm		601-010-00HD2	
Laparoscope HD+4	▶ Ø 10,0 mm; 0°	FL 330 mm		601-010-00HD4	
Laparoscope HD+	▶ Ø 10,0 mm; 30°	FL 330 mm		601-010-30HD	
Laparoscope HD+2	▶ Ø 10,0 mm; 30°	FL 330 mm		601-010-30HD2	
Laparoscope HD+4	▶ Ø 10,0 mm; 30°	FL 330 mm		601-010-30HD4	
Laparoscope HD+	▶ Ø 10,0 mm; 45°	FL 330 mm		601-010-40HD	
Laparoscope HD+2	▶ Ø 10,0 mm; 45°	FL 330 mm		601-010-40HD2	
Laparoscope HD+4	▶ Ø 10,0 mm; 45°	FL 330 mm		601-010-40HD4	

0°

30°

45°

BARIATIC LAPAROSCOPES [autoclavable]

▶ Ø 5,5 mm/10,0 mm

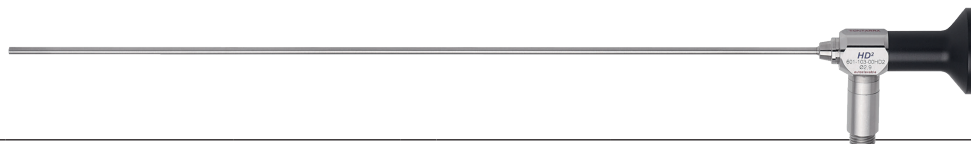
Laparoscope HD+	▶ Ø 10,0 mm; 0°	FL 450 mm		601-012-00HD	
Laparoscope HD+	▶ Ø 10,0 mm; 30°	FL 450 mm		601-012-30HD	



MINI - LAPAROSCOPES HD+2

- ▶ Ø 2,9 mm
- ▶ Compatible with most instrument- and camera systems

The miniaturization of instruments is an ongoing process also in laparoscopy: with smaller incisions, scarring and pain can be clearly reduced, thus supporting patients to recover faster from an intervention.



TELESCOPES FOR LAPAROSCOPY [autoclavable] ▶ Ø 2,9 mm [also for use in Gynecology and Urology]

Description			Art. No.	For use in Miniport Laparoscopy and Pediatric Laparoscopy.
Laparoscope HD+2	▶ Ø 2,9 mm; 0°	FL 300 mm	601-103-00HD2	
Laparoscope HD+2	▶ Ø 2,9 mm; 12°	FL 300 mm	601-103-12HD2	
Laparoscope HD+2	▶ Ø 2,9 mm; 30°	FL 300 mm	601-103-30HD2	

TONTARRA provides a well assorted laparoscopic portfolio of own instrument systems for Laparoscopy:

- A full range of trocar systems
- Suction- and irrigation systems
- Needle holders (we recommend to check out our ultralight Loftline Needleholder)
- Suturing sets, bi- and monopolar HF instruments (for example our ENDOOR C - Line)
- Large variety of LAP instruments for specialized use
- Retractors, clip appliers
- A pediatric line
- Disposables and accessories for storage and sterilization



A key element in laparoscopic surgery is the quality of the laparoscope; TONTARRA's state-of-the art HD+/HD2+/HD4+ Laparoscopes and Telescopes are among the best on the market.

TONTARRA Laparoscopes feature an excellent imaging quality, and support camera systems and instruments of nearly all well-known brands.

Contact us for further information about

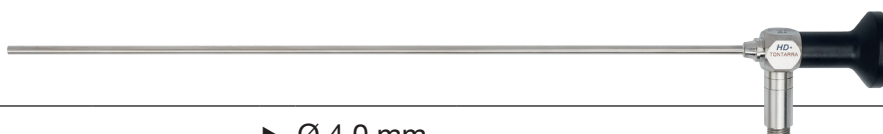
- the compatibility of your imaging system and your instruments to our telescopes
- the imaging solutions and devices we can provide for laparoscopy
- our innovative endoscopic instruments and accessories
- ... and our „lap portfolio“ in general: info@tontarra.de



GYNECOLOGY TELESCOPES HD+, HD+2

- ▶ Ø 2,9 mm / Ø 4,0 mm
- ▶ Compatible with most instrument- and camera systems

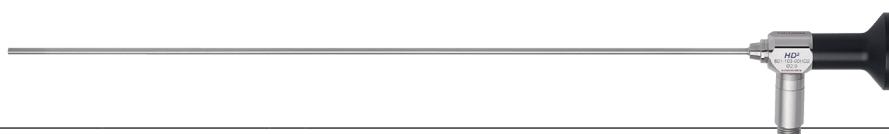
The „See & Treat“ approach has become a synonyme for office hysteroscopy. This already implies that the image quality is an essential criteria for each hysteroscopist: the clear visualization of a patients pathology is not only a prerequisite for secure diagnostics and the choice of intervention, but as well vital for a successful performance of therapeutic treatment.



HYSTEROSCOPES [autoclavable]

▶ Ø 4,0 mm

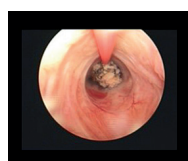
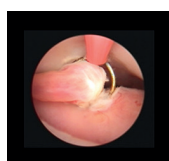
Description	Art. No.	
Hysteroscope HD+ ▶ Ø 4,0 mm; 0° FL 300 mm	601-114-00HD	· Field of view: 91°
Hysteroscope HD+2 ▶ Ø 4,0 mm; 0° FL 300 mm	601-114-00HD2	· Ø 4,0 mm is the traditional size used in diagnostic hysteroscopy, and our hysteroscope has been specially designed to achieve an extraordinary wide field of view (91°)
Hysteroscope HD+ ▶ Ø 4,0 mm; 12° FL 300 mm	601-114-12HD	
Hysteroscope HD+2 ▶ Ø 4,0 mm; 12° FL 300 mm	601-114-12HD2	
Hysteroscope HD+ ▶ Ø 4,0 mm; 30° FL 300 mm	601-114-30HD	
Hysteroscope HD+2 ▶ Ø 4,0 mm; 30° FL 300 mm	601-114-30HD2	· This size cannot be used with resectoscopes
Hysteroscope HD+ ▶ Ø 4,0 mm; 70° FL 300 mm	601-114-70HD	· Available in 4 different viewing directions
Hysteroscope HD+2 ▶ Ø 4,0 mm; 70° FL 300 mm	601-114-70HD2	· Not to be used in combination with resectoscopes



TELESCOPES FOR GYNECOLOGY [autoclavable]

▶ Ø 2,9 mm [also for use in Laparoscopy and Urology]

Description	Art. No.	
Hysteroscope HD+2 ▶ Ø 2,9 mm; 0° FL 300 mm	601-103-00HD2	· Field of view: 80°
Hysteroscope HD+2 ▶ Ø 2,9 mm; 12° FL 300 mm	601-103-12HD2	· Compatible with most instrument- and camera systems
Hysteroscope HD+2 ▶ Ø 2,9 mm; 30° FL 300 mm	601-103-30HD2	

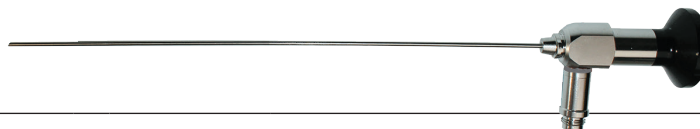


Dr. Giampietro Gubbini

Polypectomy performed by TONTARRA's Mini-Hystero-Resectoscope "GUBBINI", standardly equipped with a HD+2 telescope Ø 2,9 mm. This system is also apt for resectoscopic therapy without the need for dilatation of the cervix, and can be applied to nearly all endo-uterine pathologies.

GYNECOLOGY TELESCOPES HD

- ▶ Ø 2,0 mm
- ▶ Compatible with most instrument- and camera systems



HYSTEROSCOPES [autoclavable]

▶ Ø 2,0 mm [also for use in Urology]

Description			Art. No.	For diagnostic miniature hysteroscopes or mini operative systems, f.e. TONTARRA's hysteroscopy continuous flow operating sheath for Ø 2,0 mm telescope (Art.No. 640-025-23).
Hysteroscope HD	▶ Ø 2,0 mm; 0°	FL 187 mm	601-102-00	
Hysteroscope HD	▶ Ø 2,0 mm; 30°	FL 187 mm	601-102-30	
Hysteroscope HD	▶ Ø 2,0 mm; 0°	FL 260 mm	601-112-00	
Hysteroscope HD	▶ Ø 2,0 mm; 30°	FL 260 mm	601-112-30	

“GENTLE OFFICE HYSTERO-RESECTOSCOPY” on the rise:

TONTARRA's systems for Hystero-Resectoscopy are well in line with the demand for smaller instruments; our Mini-Hystero-Resectoscope „GUBBINI“ even allows the effective resectoscopic therapy without dilatation of the cervix. This approach is not only less traumatic for the patient, but also helps to save costs, as more interventions can be performed in an office-setting.



Contemporary Gynecology has generally shifted towards gentler treatment methods, and communication on eye-level between doctor and patient has gained importance.

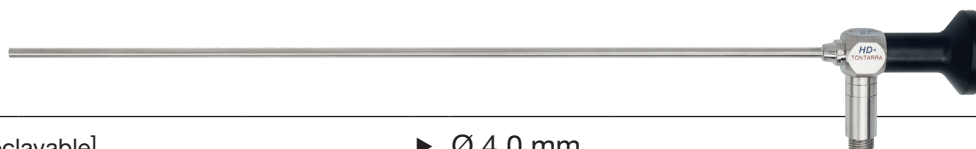
TONTARRA Hysteroscopes feature an excellent imaging quality for diagnostics and therapy, and support camera systems and instruments of nearly all well-known brands. Furthermore we feature a well-assorted portfolio of own instrument systems for Hysteroscopy of all common different sizes, among them highly innovative Hybrid Resectoscope Systems (16 Fr., 18,5 Fr., 24/26 Fr.).

Contact us for further information about

- the compatibility of your imaging system and your instruments to our telescopes,
- the imaging solutions and devices we can provide for gynecology
- our innovative endoscopic instruments and accessories,
- ... and our „gyn portfolio“ in general: info@tontarra.de

UROLOGY TELESCOPES HD+, HD+2

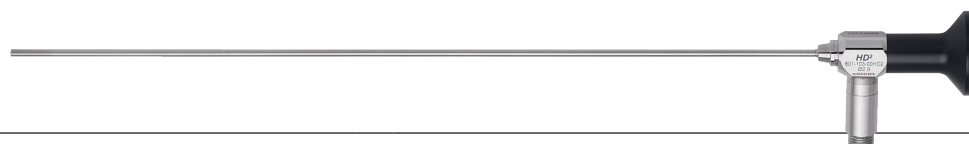
- ▶ Ø 4,0 mm / Ø 2,9 mm
- ▶ Compatible with most instrument- and camera systems



CYSTOSCOPES [autoclavable]

▶ Ø 4,0 mm

Description			Art. No.	
Cystoscope HD+	▶ Ø 4,0 mm; 0°	FL 300 mm	601-104-00HD	· Field of view: 70° · Available in four different viewing directions · For use in resectoscopy
Cystoscope HD+2	▶ Ø 4,0 mm; 0°	FL 300 mm	601-104-00HD2	
Cystoscope HD+	▶ Ø 4,0 mm; 12°	FL 300 mm	601-104-12HD	
Cystoscope HD+2	▶ Ø 4,0 mm; 12°	FL 300 mm	601-104-12HD2	
Cystoscope HD+	▶ Ø 4,0 mm; 30°	FL 300 mm	601-104-30HD	
Cystoscope HD+2	▶ Ø 4,0 mm; 30°	FL 300 mm	601-104-30HD2	
Cystoscope HD+	▶ Ø 4,0 mm; 70°	FL 300 mm	601-104-70HD	
Cystoscope HD+2	▶ Ø 4,0 mm; 70°	FL 300 mm	601-104-70HD2	



TELESCOPES FOR UROLOGY [autoclavable]

▶ Ø 2,9 mm [also for use in Laparoscopy and Urology]

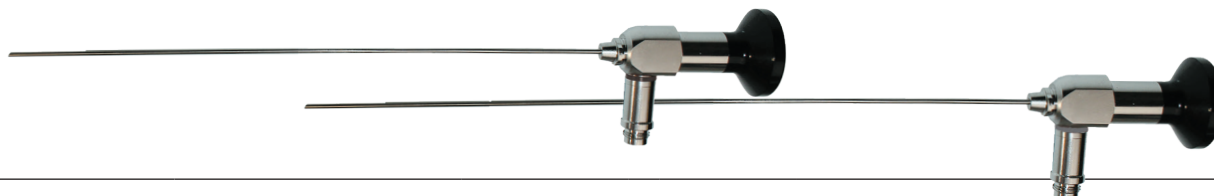
Description			Art. No.	
Cystoscope HD+2	▶ Ø 2,9 mm; 0°	FL 300 mm	601-103-00HD2	· Field of view: 80° · Compatible with most instrument- and camera systems
Cystoscope HD+2	▶ Ø 2,9 mm; 12°	FL 300 mm	601-103-12HD2	
Cystoscope HD+2	▶ Ø 2,9 mm; 30°	FL 300 mm	601-103-30HD2	

The telescope for TONTARRA's versatile 18,5 Fr. Hybrid Mini-Resectoscope for use in:

- Adolescents
- All patients who require a very considerate intervention (f.e. delicate status of urogenital structures, general poor health condition)
- Extremely tight surroundings within the urogenital system
- Fast surgery on small lesions/minor tissue removal

UROLOGY TELESCOPES HD, HD+, HD+2

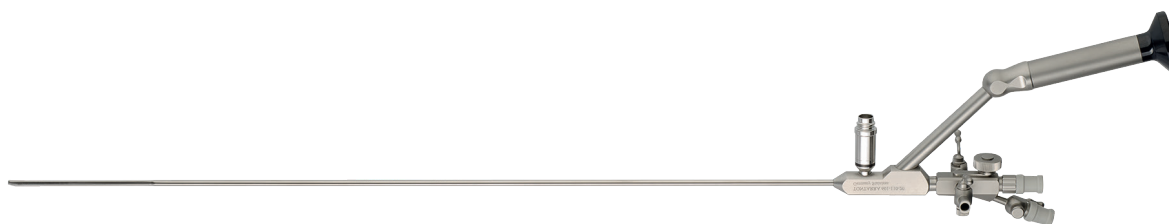
- ▶ Ø 2,0 mm
- ▶ Compatible with most instrument- and camera systems



TELESCOPES FOR UROLOGY [autoclavable]

▶ Ø 2,0 mm [also for use in Gynecology]

Description				Art. No.	For miniature cystoscopes and mini operative systems (used for example with TONTARRA's pediatric Uro-line).
Cystoscope HD	▶ Ø 2,0 mm; 0°	FL 187 mm	601-102-00		
Cystoscope HD	▶ Ø 2,0 mm; 30°	FL 187 mm	601-102-30		
Cystoscope HD	▶ Ø 2,0 mm; 0°	FL 260 mm	601-112-00		
Cystoscope HD	▶ Ø 2,0 mm; 30°	FL 260 mm	601-112-30		



TELESCOPES FOR UROLOGY [autoclavable]

▶ Ø 2,0 mm [also for use in Gynecology]

Description				Art. No.	
Uretero-Renoscope	[1 working channel 5 Fr.]				
	▶ 8,0/9,8 Fr.; 12°	FL 315 mm	601-110-05		
	▶ 8,0/9,8 Fr.; 12°	FL 430 mm	601-110-10		
Uretero-Renoscope	[1 working channel 4 Fr.]				
	▶ 6,0/7,5 Fr.; 12°	FL 315 mm	601-110-15		
	▶ 6,0/7,5 Fr.; 12°	FL 430 mm	601-110-20		

Our own instrument systems match a wide range of options for diagnostics and therapy in endoscopic urology (cystoscopes and laser-cystoscopes, resectoscopes, urethrotomes, uretero-renoscopes, nephroscopes and instruments for pediatric urology).

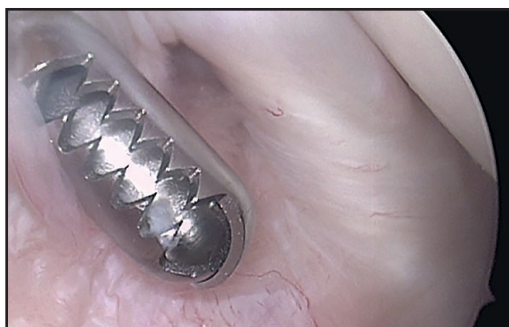
Contact us for further information about

- the compatibility of your imaging system and your instruments to our telescopes,
- the imaging solutions and devices we can provide for urology
- our innovative endoscopic instruments and accessories,
- ... and our „uro portfolio“ in general: info@tontarra.de



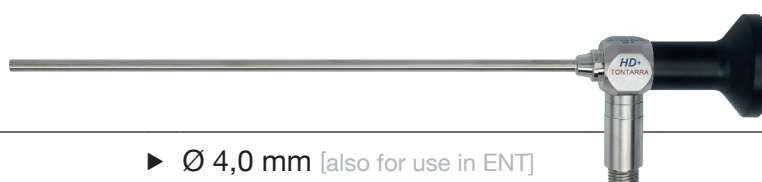
ARTHROSCOPY TELESCOPES HD+, HD+2

- ▶ Ø 4,0 mm / Ø 2,7 mm
- ▶ Compatible with most instrument- and camera systems



W.O.M./LEMKE Vision

Detailed imaging within fine structures:
during arthroscopic procedures a high image resolution,
brightness and good contrast are of outmost importance.



ARTHROSCOPES [autoclavable]

▶ Ø 4,0 mm [also for use in ENT]

Description			Art. No.	· Field of view: 70° · Available in four different viewing directions · For use in resectoscopy
Arthroscope HD+	▶ Ø 4,0 mm; 0°	FL 175 mm	601-204-00HD	
Arthroscope HD+2	▶ Ø 4,0 mm; 0°	FL 175 mm	601-204-00HD2	
Arthroscope HD+	▶ Ø 4,0 mm; 30°	FL 175 mm	601-204-30HD	
Arthroscope HD+2	▶ Ø 4,0 mm; 30°	FL 175 mm	601-204-30HD2	
Arthroscope HD+	▶ Ø 4,0 mm; 45°	FL 175 mm	601-204-40HD	
Arthroscope HD+2	▶ Ø 4,0 mm; 45°	FL 175 mm	601-204-40HD2	
Arthroscope HD+	▶ Ø 4,0 mm; 70°	FL 175 mm	601-204-70HD	
Arthroscope HD+2	▶ Ø 4,0 mm; 70°	FL 175 mm	601-204-70HD2	

0°

30°

45°

70°



ARTHROSCOPES [autoclavable]

▶ Ø 2,7 mm [also for use in ENT]

Description			Art. No.	· Field of view: 70° · Available in four different viewing directions · For use in resectoscopy
Arthroscope HD+	▶ Ø 2,7 mm; 0°	FL 187,5 mm	601-203-00HD	
Arthroscope HD+	▶ Ø 2,7 mm; 30°	FL 187,5 mm	601-203-30HD	
Arthroscope HD+	▶ Ø 2,7 mm; 70°	FL 187,5 mm	601-203-70HD	
Arthroscope HD+	▶ Ø 2,7 mm; 0°	FL 140 mm	601-201-00HD	
Arthroscope HD+	▶ Ø 2,7 mm; 30°	FL 140 mm	601-201-30HD	
Arthroscope HD+	▶ Ø 2,7 mm; 70°	FL 140 mm	601-201-70HD	



ARTHROSCOPY TELESCOPES HD, HD+

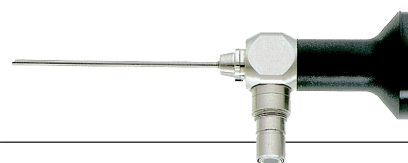
- ▶ Ø 2,7 mm / Ø 1,9 mm
- ▶ Compatible with most instrument- and camera systems



ARTHROSCOPES [autoclavable]

▶ Ø 2,7 mm [also for use in ENT]

Description			Art. No.	· Field of view: 70° · Available in four different viewing directions · For use in resectoscopy
Arthroscope HD	▶ Ø 2,7 mm; 0°	FL 175 mm	601-202-00	
Arthroscope HD	▶ Ø 2,7 mm; 30°	FL 175 mm	601-202-30	
Arthroscope HD	▶ Ø 2,7 mm; 70°	FL 175 mm	601-202-70	
Arthroscope HD	▶ Ø 2,7 mm; 0°	FL 110 mm	601-303-00	
Arthroscope HD	▶ Ø 2,7 mm; 30°	FL 110 mm	601-303-30	
Arthroscope HD	▶ Ø 2,7 mm; 70°	FL 110 mm	601-303-70	



ARTHROSCOPES [autoclavable]

▶ Ø 1,9 mm [also for use in ENT]

Description			Art. No.	
Arthroscope HD+	▶ Ø 1,9 mm; 0°	FL 60 mm	601-122-00HD	
Arthroscope HD+	▶ Ø 1,9 mm; 30°	FL 60 mm	601-122-30HD	

Our own instrument systems match a wide range of options for diagnostics and therapy in arthroscopy:

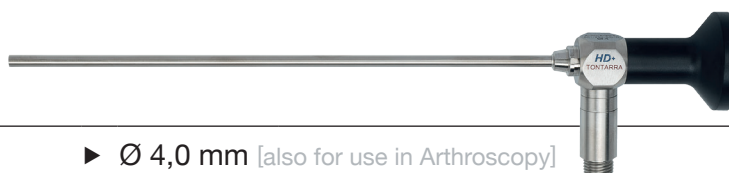
Contact us for further information about

- the compatibility of your imaging system and your instruments to our telescopes,
- the imaging solutions and devices we can provide for arthroscopy
- our innovative endoscopic instruments and accessories,
- ... and our „arthro portfolio“ in general: info@tontarra.de



ENT TELESCOPES HD, HD+, HD+2

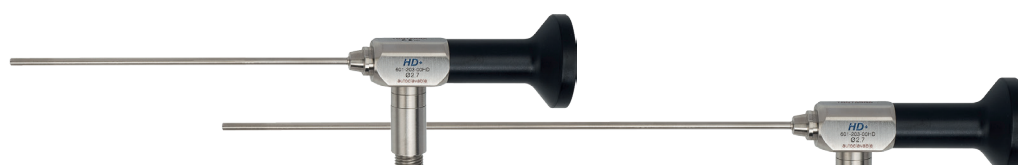
- ▶ Ø 4,0 mm / Ø 2,7 mm
- ▶ Compatible with most instrument- and camera systems



SINUSCOPES [autoclavable]

▶ Ø 4,0 mm [also for use in Arthroscopy]

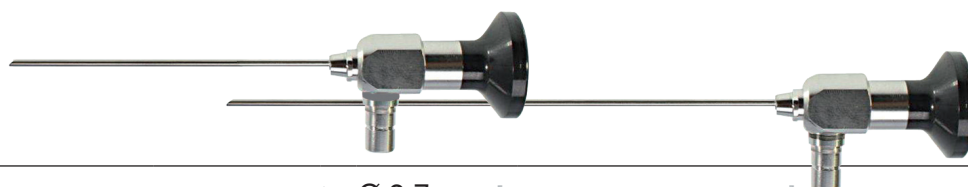
Description				Art. No.	
Sinuscope HD+	▶ Ø 4,0 mm; 0°	FL 175 mm		601-204-00HD	
Sinuscope HD+2	▶ Ø 4,0 mm; 0°	FL 175 mm		601-204-00HD2	
Sinuscope HD+	▶ Ø 4,0 mm; 30°	FL 175 mm		601-204-30HD	
Sinuscope HD+2	▶ Ø 4,0 mm; 30°	FL 175 mm		601-204-30HD2	
Sinuscope HD+	▶ Ø 4,0 mm; 45°	FL 175 mm		601-204-40HD	
Sinuscope HD+2	▶ Ø 4,0 mm; 45°	FL 175 mm		601-204-40HD2	
Sinuscope HD+	▶ Ø 4,0 mm; 70°	FL 175 mm		601-204-70HD	
Sinuscope HD+2	▶ Ø 4,0 mm; 70°	FL 175 mm		601-204-70HD2	



SINUSCOPES [autoclavable]

▶ Ø 2,7 mm [also for use in Arthroscopy]

Description				Art. No.	
Sinuscope HD+	▶ Ø 2,7 mm; 0°	FL 187,5 mm		601-203-00HD	
Sinuscope HD+	▶ Ø 2,7 mm; 30°	FL 187,5 mm		601-203-30HD	
Sinuscope HD+	▶ Ø 2,7 mm; 70°	FL 187,5 mm		601-203-70HD	
Sinuscope HD+	▶ Ø 2,7 mm; 0°	FL 140,0 mm		601-201-00HD	
Sinuscope HD+	▶ Ø 2,7 mm; 30°	FL 140,0 mm		601-201-30HD	
Sinuscope HD+	▶ Ø 2,7 mm; 70°	FL 140,0 mm		601-201-70HD	
Sinuscope HD+	▶ Ø 2,7 mm; 0°	FL 187,5 mm		601-203-00HD	
Sinuscope HD+	▶ Ø 2,7 mm; 30°	FL 187,5 mm		601-203-30HD	



SINUSCOPES [autoclavable]

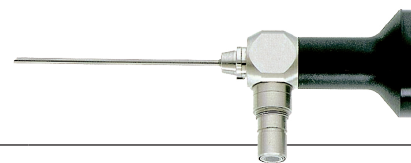
▶ Ø 2,7 mm [also for use in Arthroscopy]

Description				Art. No.	
Sinuscope HD	▶ Ø 2,7 mm; 0°	FL 175 mm		601-202-00	
Sinuscope HD	▶ Ø 2,7 mm; 30°	FL 175 mm		601-202-30	
Sinuscope HD	▶ Ø 2,7 mm; 70°	FL 175 mm		601-202-70	
Sinuscope HD	▶ Ø 2,7 mm; 0°	FL 110 mm		601-303-00	
Sinuscope HD	▶ Ø 2,7 mm; 30°	FL 110 mm		601-303-30	
Sinuscope HD	▶ Ø 2,7 mm; 70°	FL 110 mm		601-303-70	
Sinuscope HD	▶ Ø 2,7 mm; 0°	FL 175 mm		601-202-00	
Sinuscope HD	▶ Ø 2,7 mm; 30°	FL 175 mm		601-202-30	



ENT TELESCOPES SUITABLE FOR HD-SYSTEMS

- ▶ Ø 1,9 mm Oscopes
- ▶ Ø 3,4 mm Rhino-Laryngoscopes

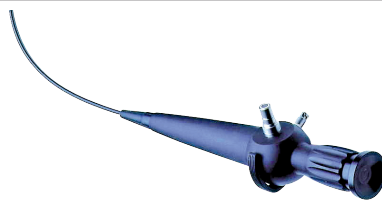


OTOSCOPE [autoclavable]

▶ Ø 1,9 mm [also for use in Arthroscopy]

Description			Art. No.
Otoscope HD+	▶ Ø 1,9 mm; 0°	FL 60 mm	601-122-00HD
Otoscope HD+	▶ Ø 1,9 mm; 30°	FL 60 mm	601-122-30HD

FLEXIBLE RHINO-LARYNGOSCOPE

Description	Art. No.	
ENT-ULTRASLIM Flexible Rhino-Laryngoscope ▶ Ø 3,4 mm; FL 300 mm ▶ bending range 130° up and down ▶ direction of view 0°	601-904-01	
TONTARRA'S ULTRA-SLIM RHINO-LARYNGOSCOPES Ø 3,4 mm: improved patient comfort, ergonomic handling for users · Gentle insertion thanks to the smaller diameter · Premium optical quality provides best image for users · Very ergonomic design for effortless use · Outstanding stability and durability		

ENT-VIEWER - CMOS Video - Rhino-Laryngoscope All in One HD MED-CAM system

Description	Art. No.	
Consisting of Camera head, Coupler, Med-cam control unit & Video Rhino-Laryngoscope		
Video Rhino-Laryngoscope Ø 3,4 mm, integrated LED illumination · Ø 3,4 mm; FL 300 mm · Diameters: distal end 3,2 mm, insertion tube 3,4 mm · Direction of view 0°/ Field of view 90° · Bending range of distal tip 130° up/down	601-905-01	
Med-cam control unit Input voltage range: 100-240VAC, 50/60 Hz Output 1 x USB for image storage, DVI	601-905-02	
Coupler	601-905-03	
HD Camera head	601-905-04	

TONTARRA ENT Telescopes feature an excellent imaging quality, and support camera systems and instruments of nearly all well-known brands. Furthermore we feature a well-assorted portfolio of own instruments for ENT.

Contact us for further information about

- the compatabilty of your imaging system and your instruments to our telescopes,
- the imaging solutions and devices we can provide for ENT
- our innovative endoscopic instruments and accessories,
- ... and our „ENT portfolio“ in general: info@tontarra.de

ACCESSORIES

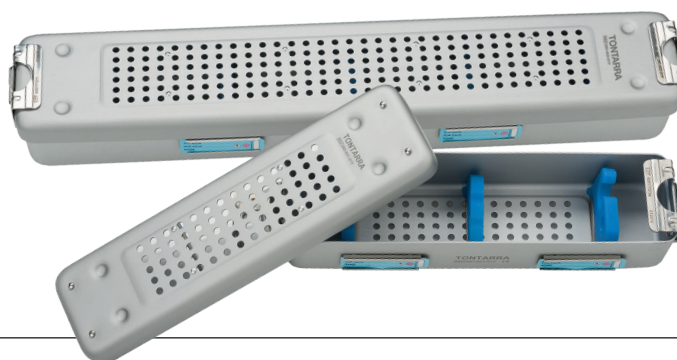
- Storage and sterilization of telescopes; spare parts



PROTECTION

- For all Telescopes up to 5,0 mm

Description	Art. No.	
Protecting sleeve	► up to Ø 5,0 mm ► 10 pcs./box	590-000-01
· Plastic sleeve · Easy handling		



TELESCOPE CONTAINER

Description	450 x 70 x 70 mm	250 x 60 x 50 mm	
► silver	260-602-01Y	260-601-01Y	Lid and bottom perforated; complete Outside dimension
► yellow	260-602-02Y	260-601-02Y	
► red	260-602-03Y	260-601-03Y	
► blue	260-602-04Y	260-601-04Y	
► green	260-602-05Y	260-601-05Y	
► black	260-602-06Y	260-601-06Y	

ACCESSORIES

- Storage and sterilization of telescopes; spare parts



WIRE BASKET WITH FIXATION

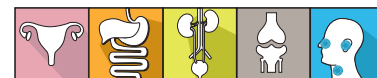
► Container height 55 mm H

Description	Telescopes	Art. No.	H Container height Outside dimension
Wire basket ► 290 x 80 x 55mm	1	260-600-03Y	
Wire basket ► 460 x 80 x 55mm	1	260-600-04Y	
Wire basket ► 670 x 80 x 55mm	1	260-600-07Y	
Wire basket ► 290 x 80 x 55mm	2	260-600-05Y	
Wire basket ► 460 x 80 x 55mm	2	260-600-06Y	

LIGHT GUIDE ADAPTERS [spare parts]

Description	Art. No.	
RICHARD WOLF - Light guide adapter	601-900-10	
STORZ/OLYMPUS - Light guide adapter	601-900-00	

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Courtesy of:

* W.O.M./LEMKE Vision: pictures on page 3/page 4/page 6/page 12

* Dr. Giampietro Gubbini: picture on page 8



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