

## Glass Bottom Dishes

WillCo Wells B.V. is the manufacturer of various types of the finest – and unique design in Glass Bottom Dishes. We created the first design over ten years ago, shortly after the introduction of the “inverted” confocal microscope.



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## Why the WillCo-dish® Glass Bottom Dish?

Glass bottom containers are a requirement when using High Numerical Aperture coverslip corrected objectives.

The WillCo-dish® design insures a flat coverslip for optimal imaging. The coverslip is flush with the warming-stage, which:

- provides optimal and equally divided heating of the cells on the bottom of the dish
- ensures that there are no optical aberrations, especially in live cell applications
- ensures that there is no lateral shift in Z

NOTE: A tilted coverslip will introduce lateral shift in Z, optical aberrations as well as differences in temperature, especially in live cell applications.

## Design

To keep the glass coverslip bottom flush with the stage-warmer, it is essential to have a firm dish, with a solid wall. Because of this, the WillCo-dish®es do not have the familiar thin outer steep-walled shape. They make an unusual and robust first impression on the

Microscope Technician—they look fantastic! When picking up the dish from a warming stage, you can see why they look so solid: the dish has an integrated outer ring. You do not have to worry about the lid, because it has a smaller diameter than the dish. The outer ring gives you a secure grip on the dish and its valuable contents, your cells.

## Glass Bottom Dishes

WillCo-dish® glass bottom dishes were created over ten years ago, in response to the optical and environmental needs created by High Resolution Live Cell Imaging.



# Features / range

transparent range



black range



## Types of WillCo-dish® 's

Our Glass Bottom Dishes are available in 35 mm and 50 mm diameters:

- The 35 mm dish is available with an aperture of either 12 mm or 22 mm.
- The 50 mm dish is available with an aperture of either 30 mm or 40 mm.

## Advantages

1. A much larger effective range when using an objective lens with a short working distance (WD).
2. Because of the thin (0.17 mm.) glass bottom, there is no birefringence effect
3. Low rim/side wall of the dish make micromanipulation/micro-injection possible.
4. Higher effective N.A. creates brighter images (e.g. in fluorescence).
5. Higher effective N.A. facilitates higher resolutions in image analysis.
6. Microscope light passes orthogonally through the bottom glass, with the glass resting on the stage.
7. The warming-stage heats the glass directly and evenly, because the bottom glass is flush with the stage.
8. In IVF, no more oocyte-/embryo transfer is needed from one plastic-/glass dish to another, unless different media are being used, which saves a lot of time.
9. The Perfusion Chamber Insert allows easy perfusion in the glass bottom dish, for continuous in- and outflow of solutions.

# Applications



## Microscope applications

A wide range of applications appeared after the introduction of the first magnificent inverted-confocal microscopes. And long before the rise of the confocal microscope, many applications already used the Glass Bottom Dishes, including High Magnification (with high N.A.), Phase Contrast and DIC.

## Applications

- Live Cell Microscopy
- Multi-Photon Laser Scanning Microscopy (MPLSM)
- High Level Laser Fluorescence Lifetime Imaging Microscopy (FLIM)
- Fluorescence Resonance Energy Transfer (FRET)
- Fluorescence Redistribution After Photobleaching Microscopy (FRAP)
- Epifluorescence Microscopy
- Fluorescence Microscopy
- Immunofluorescence Microscopy
- Confocal Microscopy
- Confocal Laser Scanning Microscopy (CLSM)
- Phase Contrast Microscopy
- Polarized Light microscopy
- Differential Interference Contrast (DIC)
- High Resolution Image Analysis
- Time Lapse Photography
- Video-Enhanced Microscopy
- Infrared Imaging (e.g.: brain slide recordings)
- Calcium Imaging
- Colocalization Studies
- Green Fluorescence Protein (GFP)
- Micromanipulation
- Microinjection
- Super Resolution

## Fertility & Infertility

Laboratories for Fertility & Infertility (IVF, ICSI, IMSI, Pre-Implantation Diagnostics, etc.) are major users of the WillCo-dish® Series GWSt-5040, because of its dedicated design and high tech quality. The final design (50 x 7 mm) was supported by the staff of several University Fertility and Infertility Departments and IVF Clinics. IVF-test and LAL-test certificates are available, on request.

## Scientific Fields

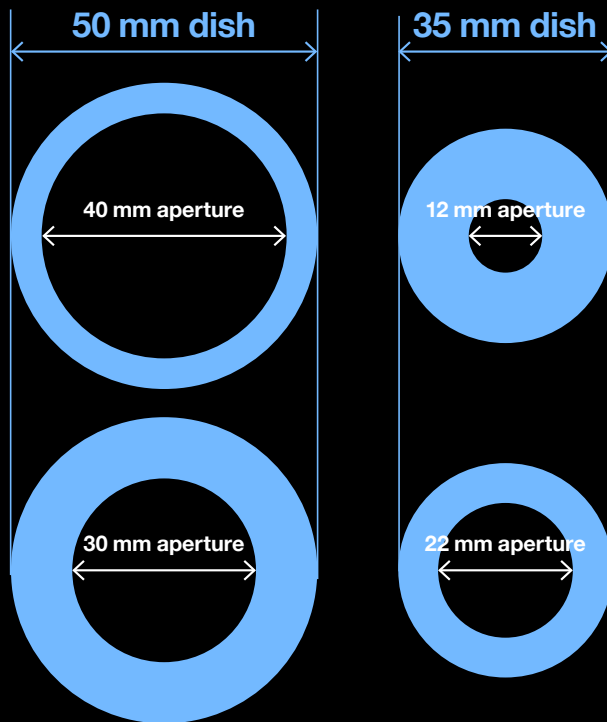
Glass Bottom Cell Culture dishes are used in the fields of Life Science and Environmental Research, Marine-, Micro-, Molecular- and Cell Biology, Cell Culture and Cell Physiology, Biotechnology, Genetics, Anatomy, Neurology, Pathology, Pharmacology and many more.

## Microscope Manufacturers

From the very beginning of the design of our WillCo-dish® Glass Bottom Dishes, we have liaised with the staff and representatives of the “big four” microscope manufacturers, [Carl Zeiss](#), [Leica Microsystems](#), [Nikon](#) and [Olympus](#). Company staff, product managers and sales representatives soon recognized the unique design and high tech quality of the WillCo-dish® Glass Bottom Dishes. They now use them in their demonstrations, workshops and trade shows.



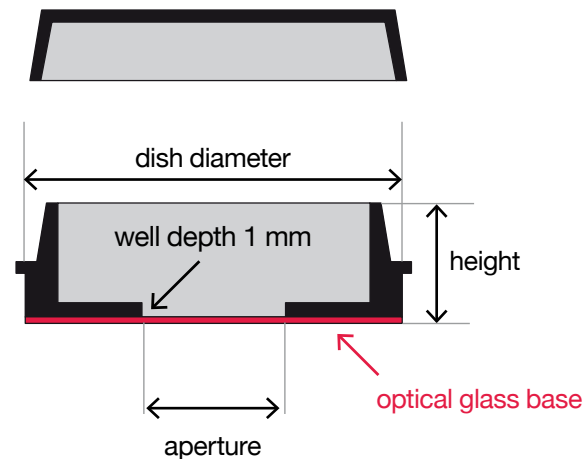
# Technical Specifications



## Size and apertures

**The 35 mm dish:**  
available with an aperture of either 12 mm or 22 mm.

**The 50 mm dish:**  
available with an aperture of either 30 mm or 40 mm.



## Production

Production takes place in a Class 10.000 Clean Room, certified under: ISO 9001: 2000 and ISO 13485: 2003 (clean room). All WillCo-dish®es are gamma irradiated (STERILE R) by Isotron Nederland BV ([www.isotron.com](http://www.isotron.com)) in Ede, the Netherlands. Certified: EN552, ISO 9001, ISO 13485 and ISO 14001

## Packaging

We can deliver your WillCo-dish®es in:

- BLISTER-PACK: PET-G MED blister with Tyvek® cover; Single unit packed; 120 units/case.
- POUCH-PACK : Sleeve per 20 units, 200 units per case.
- WillCo-dish®KIT “Do-It-Yourself”:  
500 units of each and every part of the dish.

Tyvek® is a registered trademark of E. I. du Pont de Nemours and Company.





# Products

## Distributors

Over the years, we have created a network of well respected distributors. Without their continuous support of the WillCo-dish@es, it would not have been possible to grow and to develop to our current position in the market with our Glass Bottom Dishes.



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## BLISTER-PACK / Transparent

Ref. code	Size / mm.	Aperture Ø	Vol / mL	Packed	Total / Case	STERILE R	PRICE Nett*
GWSt-3512	35 x 10	12 mm. glass	400 mL	single unit	120 units	Gamma	Euro 426
GWSt-3522	35 x 10	22 mm. glass	1000 mL	single unit	120 units	Gamma	Euro 426
GWSt-5030	50 x 7	30 mm. glass	1500 mL	single unit	120 units	Gamma	Euro 426
GWSt-5040	50 x 7	40 mm. glass	4000 mL	single unit	120 units	Gamma	Euro 426

## BLISTER-PACK / Black

Ref. code	Size / mm.	Aperture Ø	Vol / mL	Packed	Total / Case	STERILE R	PRICE Nett*
GWSB-3512	35 x 10	12 mm. glass	400 mL	single unit	120 units	Gamma	Euro 426
GWSB-3522	35 x 10	22 mm. glass	1000 mL	single unit	120 units	Gamma	Euro 426
GWSB-5030	50 x 7	30 mm. glass	1500 mL	single unit	120 units	Gamma	Euro 426
GWSB-5040	50 x 7	40 mm. glass	4000 mL	single unit	120 units	Gamma	Euro 426

## BLISTER-PACK / Transparent / Foil Bottom Dish

Ref. code	Size / mm.	Aperture Ø	Vol / mL	Packed	Total / Case	STERILE R	PRICE Nett*
FWSt-5030	50 x 7	30 mm. foil	1500 mL	single unit	120 units	Gamma	Euro 570

(For MICRO-DISSECTION, we offer the WillCo-dish@FOIL Bottom Dish; PEN/PET, 2 micron).

## POUCH-PACK / Transparent

Ref. code	Size / mm.	Aperture Ø	Vol / mL	Packed	Total / Case	STERILE R	PRICE Nett*
HBSt-3512	35 x 10	12 mm. glass	400 mL	20 / sleeve	200 units	Gamma	Euro 530
HBSt-3522	35 x 10	22 mm. glass	1000 mL	20 / sleeve	200 units	Gamma	Euro 530
HBSt-5030	50 x 7	30 mm. glass	1500 mL	20 / sleeve	200 units	Gamma	Euro 530
HBSt-5040	50 x 7	40 mm. glass	4000 mL	20 / sleeve	200 units	Gamma	Euro 530

## POUCH-PACK / Black

Ref. code	Size / mm.	Aperture Ø	Vol / mL	Packed	Total / Case	STERILE R	PRICE Nett*
HBSB-3512	35 x 10	12 mm. glass	400 mL	20/sleeve	200 units	Gamma	Euro 530
HBSB-3522	35 x 10	22 mm. glass	1000 mL	20/sleeve	200 units	Gamma	Euro 530
HBSB-5030	50 x 7	30 mm. glass	1500 mL	20/sleeve	200 units	Gamma	Euro 530
HBSB-5040	50 x 7	40 mm. glass	4000 mL	20/sleeve	200 units	Gamma	Euro 530

## Despatch & Shipping

We value your order(s), and will always take excellent care of them. Orders arriving before noon will be despatched the same day (providing they are in stock) and shipped by FedEx. You can track your order on the FedEx website.

## Payment Terms, general Terms and Conditions

You are welcome to read our payment terms and our general terms and conditions on our website, [www.willcowells.com](http://www.willcowells.com), under the COMPANY tab. We can also send you our terms by fax.

## (\*): Additional fees:

- Handling & Packaging fee: Euro 15.00
- Administration fee: Euro 15.00
- Credit card fee: 5%
- Check fee: Euro 20.00

# Ordering



**WILLCO WELLS™**  
BEYOND VISION

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## WillCo-dish®KIT “Do-It-Yourself”

Besides the pre-fab WillCo-dish®es, a perfect “Do-It-Yourself” kit is available.

### WillCo-dish®KIT “Do-It-Yourself”

Ref. code	Size / mm.	Aperture Ø	Vol / mL	Packed	Total / Case	STERILE R	PRICE Nett*
KIT-3512	35 x 10	12 mm. glass	400 mL	4 Parts	500 units	Gamma	Euro 475
KIT-3522	35 x 10	22 mm. glass	1000 mL	4 Parts	500 units	Gamma	Euro 475
KIT-5030	50 x 7	30 mm. glass	1500 mL	4 Parts	500 units	Gamma	Euro 475
KIT-5040	50 x 7	40 mm. glass	4000 mL	4 Parts	500 units	Gamma	Euro 475

### ASSEMBLY DEVICE for “Do-It-Yourself” WillCo-dish®KIT dishes

Ref. code	Size / mm.	Aperture Ø	Vol / mL	Packed	Total / Case	STERILE R	PRICE Nett*
DEV-3512	35 x 10	12 mm.	NA	2 Parts	1 unit	NA	Euro 115
DEV-3522	35 x 10	22 mm.	NA	2 Parts	1 unit	NA	Euro 115
DEV-5030	50 x 7	30 mm.	NA	2 Parts	1 unit	NA	Euro 125
DEV-5040	50 x 7	40 mm.	NA	2 Parts	1 unit	NA	Euro 125

## Accessories

Many accessories are available for working with the WillCo-dish®, e.g. adaptor rings, dish holders, heating-chambers, cooling-chambers and perfusion-chambers. See our [website](#), or contact us for further information.



## Orders

Please address your orders to our Sales Department:

Phone : + 31 (0) 20 685 0171  
 Toll free phone: 1 888 8711 748 (U.S.A. and Canada, only)  
 By fax: + 31 (0) 20 685 0333.  
 By e-mail: [sales@willcowells.com](mailto:sales@willcowells.com)  
 On-line: [www.willcowells.com](http://www.willcowells.com) or [www.glassbottomdish.eu](http://www.glassbottomdish.eu)  
 By regular mail: WillCo Wells B.V., WG plein 287, 1054 SE Amsterdam, the Netherlands.

Please do not hesitate to contact us with inquiries, questions or comments.

#### (\*): Additional fees:

- Handling & Packaging fee: Euro 15.00
- Administration fee: Euro 15.00
- Credit card fee: 5%
- Check fee: Euro 20.00