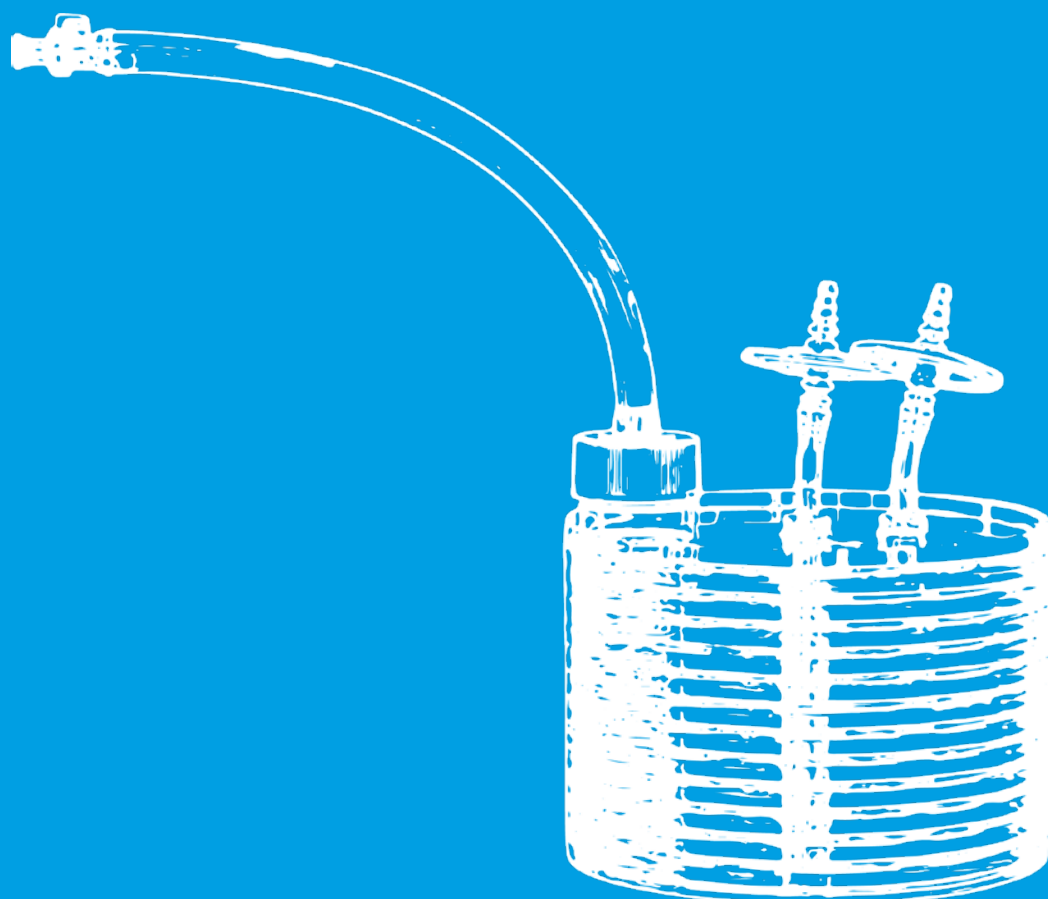


making a difference

# INSTRUCTIONS FOR USE

## **CELLDISC**

With closed filling caps  
(-CF1/ -CF2)



# SIMPLIFY YOUR CELL CULTURE WORK PROCESS

## CELLDISC

The Greiner Bio-One CELLdisc is a ready-to-start, multi-layer device, as easy to use as a T-flask. The innovative ergonomic CELLdisc design provides a versatile system for the propagation of adherent mammalian cells from research scale to industrial batches. It is available either with the standard tissue culture surface (TC; red screw cap) or the Advanced TC surface (blue screw cap) identical to all Greiner Bio-One cell culture products to assure consistent performance from lot to lot and from format to format.

## INTENDED USE

General laboratory product for cell culture to be used by qualified personnel in a laboratory environment. For research use or for further processing. Not for diagnostic use or direct administration into humans.

## CELLDISC WITH CLOSED FILLING CAPS

Working in a GMP surrounding requires maximal security on sterility and hence a closed system for fluid transfer which excludes any opening of a cell culture disposable during cell cultivation. For such applications Greiner Bio-One has developed the new CELLdisc versions with closed filling caps. These consist of flexible USP class VI certified silicone tubes attached to the CELLdisc screw cap which can be safely connected to liquid reservoirs like media bags using the included MPC connector. For each CELLdisc two versions are available:

- / Closed filling cap with single tubing (-CF1)
- / Closed filling cap with double tubing with included dip-in tube (-CF2)

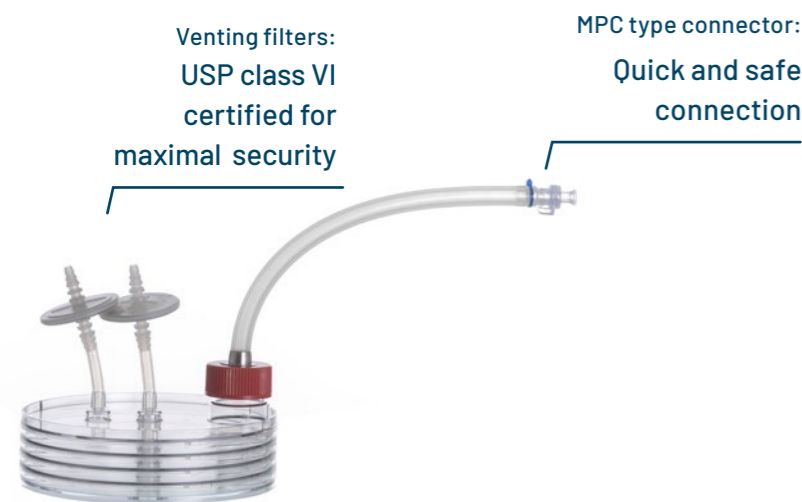


Figure 1: CELLdisc 4 layers with closed filling cap (-CF1)

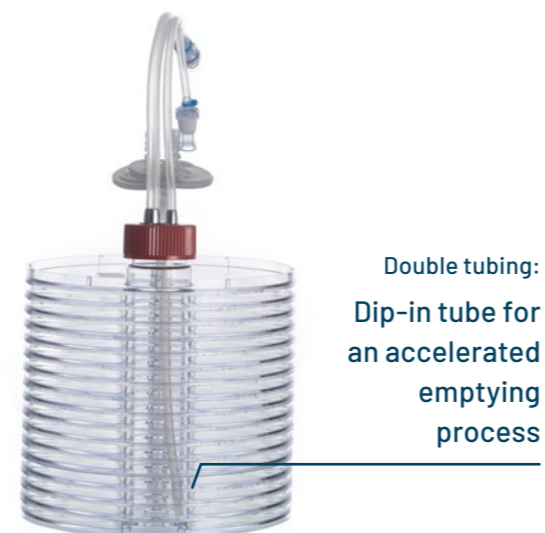


Figure 2: CELLdisc 16 layers with closed filling cap (-CF2)

## 1/ SINGLE LAYER CELLDISC WITH CLOSED FILLING CAP



1

Unpack the single layer CELLdisc and place it in a laminar air flow cabinet in order to work in sterile conditions. Prepare cell suspension in accordance with the concentration (cells/cm<sup>2</sup>) used with other disposables for adherent cell culture.



2

Remove the plug of the filling tube of -CF1 version and connect it to your media bag or the corresponding counterpart.



3

Fill the CELLdisc with the appropriate liquid volume. Information on emptying the CELLdisc, can be found in 2/ section 10.

i

Tilt the single layer CELLdisc gently from one side to the other to assure that media and cells distribute evenly.

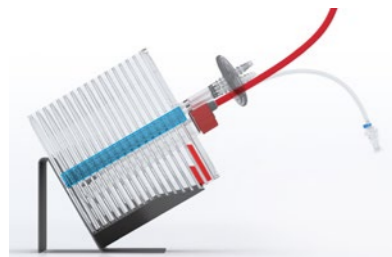
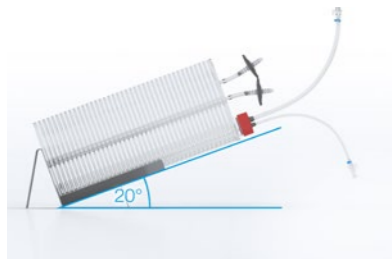
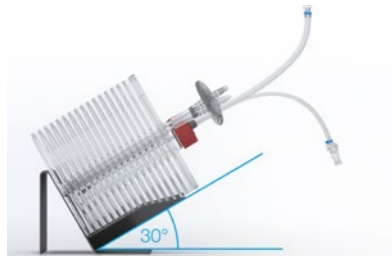


## WARNING

The media or cell suspension should not touch the filter. If the filter has absorbed fluid, this will inhibit any gas transfer into and out of the CELLdisc. In this case the disposable has to be discarded and a new CELLdisc device has to be used.

RECOMMENDED HANDLING

## 2/ CELLDISC WITH 4-40 LAYERS WITH CLOSED FILLING CAP



1

Unpack the CELLdisc and place it in a laminar air flow cabinet in order to work in sterile conditions. The **CELLstage** can be used to achieve the perfect filling angle of 30° (4-24 layers) or 20° (40 layers).

i

The filling process described in the following section is equivalent for both CELLdisc versions (-CF1 and -CF2).

2

Hold the CELLdisc with the screw cap at a position of approximately 105° for right-handed or 255° for left-handed users.

3

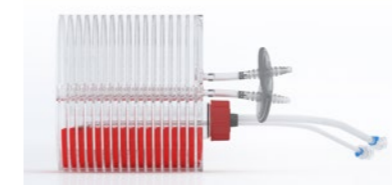
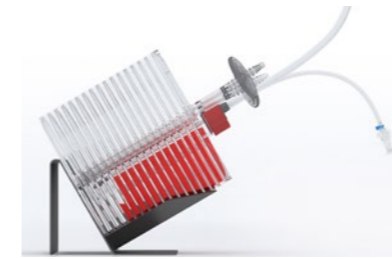
Remove the plug of the filling tube of -CF1 or -CF2 version and connect it to your media bag or the corresponding counterpart. The media will fill the topmost layer first and then move slowly to each layer underneath.



### WARNING

To obtain equivalent cell growth in all layers, formation of air bubbles must be avoided during CELLdisc processing. Therefore, an exact angle of 30° and a specific position of the central filling channel (see Fig. 1 and Fig. 2) must be maintained during filling of 4-, 8-, 16- and 24-layer CELLdisc. While the position of the screw cap/filling channel and the general filling procedure is identical a smaller angle of 20° must be maintained during filling of a 40-layer CELLdisc. This handling procedure guarantees that the pressure is equalized through the central gas channel (indicated in blue in Fig. 3) without contact with the filled in liquid. Thus, the air does not flow through the liquid and does not cause foaming. In addition to the filling process, any generation of air bubbles should be avoided. Vigorous shaking of the CELLdisc is not recommended. Larger volumes of liquids should be mixed outside the CELLdisc and then added to the disposable as described above. Small amounts can be pipetted directly into the CELLdisc and then distributed to all layers by repeating the equilibration process.

## 2/ CELLDISC WITH 4-40 LAYERS WITH CLOSED FILLING CAP



4

Keep CELLdisc in the indicated position until CELLdisc is filled with the intended amount. After filling is completed, MPC connector can be disconnected and plug re-inserted to close connector.

5

To start liquid equilibration, lay the CELLdisc down horizontally and turn it as displayed to assure that the media and all layers are in contact through the filling channel. The media will now distribute evenly over all layers.

6

Turn the CELLdisc as indicated to disconnect media flow from the filling channel. Do not rotate the CELLdisc any further, as this could lead to wetting of the filter.

i

To guarantee an equal distribution of small volumes of liquid (e.g. trypsin) the CELLdisc must be positioned horizontally with the opening port at the lowest position.

7

From this position raise the CELLdisc upright and place the disposable on a horizontal surface.



RECOMMENDED HANDLING

RECOMMENDED HANDLING

## 2/ CELLDISC WITH 4-40 LAYERS WITH CLOSED FILLING CAP

### PRODUCT OVERVIEW

FOR FURTHER INFORMATION AND/OR SAMPLE ORDERING PLEASE VISIT OUR WEBSITE OR CONTACT US.



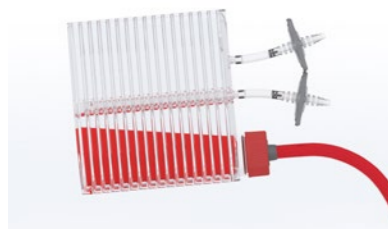
During transport, tilt the CELLDisc slightly backward to assure that there is no liquid contact with the filling channel or accidental media flow to another layer.



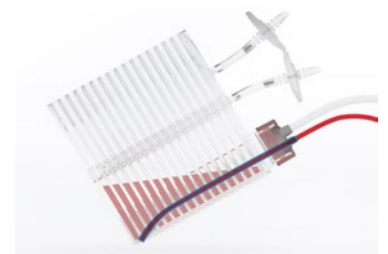
Place the CELLDisc inside an incubator. Proceed with the cultivation based on the appropriate protocol.



For liquid removal of a -CF1 variant, remove plug-in and tilt the CELLDisc slowly 90° with the large opening port at the lowest possible position and pour out the media.



For liquid removal of a -CF2 variant, remove plug from MPC connector of the Dip-in tube and connect it to your vacuum pump. To avoid any dead volume tilt CELLDisc slightly as indicated. After draining, disconnect MPC connector and re-insert plug.



#### CELLdisc with TC surface

Sterility SAL 10<sup>-6</sup>

Item No.	Layers	Surface	Growth area [cm <sup>2</sup> ]	Min. working volume [ml]	Max. working volume [ml]	Ø [mm]	Bag [pcs]
678101	1	● TC	250	15	50	200	8
678104	4	● TC	1.000	60	200	200	4
678108	8	● TC	2.000	120	400	200	3
678112	12	● TC	3.000	180	600	200	2
678116	16	● TC	4.000	240	800	200	2
678124	24	● TC	6.000	360	1.000	200	2
678140	40	● TC	10.000	600	2.000	200	1

#### CELLdisc with Advanced TC surface

Sterility SAL 10<sup>-6</sup>

● Adv. TC on demand

Item No.	Layers	Surface	Growth area [cm <sup>2</sup> ]	Min. working volume [ml]	Max. working volume [ml]	Ø [mm]	Bag [pcs]
678901	1	● Adv. TC	250	15	50	200	8
678904	4	● Adv. TC	1.000	60	200	200	4
678908	8	● Adv. TC	2.000	120	400	200	3
678912	12	● Adv. TC	3.000	180	600	200	2
678916	16	● Adv. TC	4.000	240	800	200	2
678924	24	● Adv. TC	6.000	360	1.000	200	2
678940	40	● Adv. TC	10.000	600	2.000	200	1

#### CELLdisc with external filter

Sterility SAL 10<sup>-6</sup>, triple packed

● Adv. TC on demand

Item No.	Layers	Surface	Description
6781xx-EXF	1-40	● TC	CELLdisc with external filter
6789xx-EXF	1-40	● Adv. TC	CELLdisc with external filter

#### CELLdisc with closed filling caps

Sterility SAL 10<sup>-6</sup>, triple packed

● Adv. TC on demand

Item No.	Layers	Surface	Description
6781xx-CF1	1-40	● TC	CELLdisc with closed filling cap, single tubing and external filter
6781xx-CF2	4-40	● TC	CELLdisc with closed filling cap, double tubing and external filter
6789xx-CF1	1-40	● Adv. TC	CELLdisc with closed filling cap, single tubing and external filter
6789xx-CF2	4-40	● Adv. TC	CELLdisc with closed filling cap, double tubing and external filter

#### CELLdisc Accessories

Item No.	Description	Material	Measure [mm]	Weight [kg]
878072	CELLstage for CELLDisc with 4-24 layers	stainless steel	219x211x126	1.53
878073	CELLstage for CELLDisc with 40 layers	stainless steel	311x211x141	2.29

RECOMMENDED HANDLING

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