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Invitrogen Corporation

DynaChip™ Processor
User Manual

Rev 002

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Definition of User Attention Words:

NOTE: Indicates information that is necessary for proper instrument operation
CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
WARNING Indicates a potentially hazardous situation which, if not avoided, may result in death or in serious injury.

1 Introduction

The DynaChip™ Processor is designed for the automated performance of multiplex tests in the DynaChip™ strip, which are standard 8-well strips with a protein array chip integrated in the bottom of each well.
Up to 12 DynaChip™ strips can be placed into the DynaChip™ Processor for the parallel multi parameter testing of up to 96 individual samples. The DynaChip™ Processor itself is a liquid handling machine with an integrated detection unit, performing all liquid handling and incubation steps of an assay including array image detection and analysis. Automated device control and array image analysis is done via the DynaChip™ software installed on an external computer connected to the DynaChip™ Processor.

1.1 System Overview

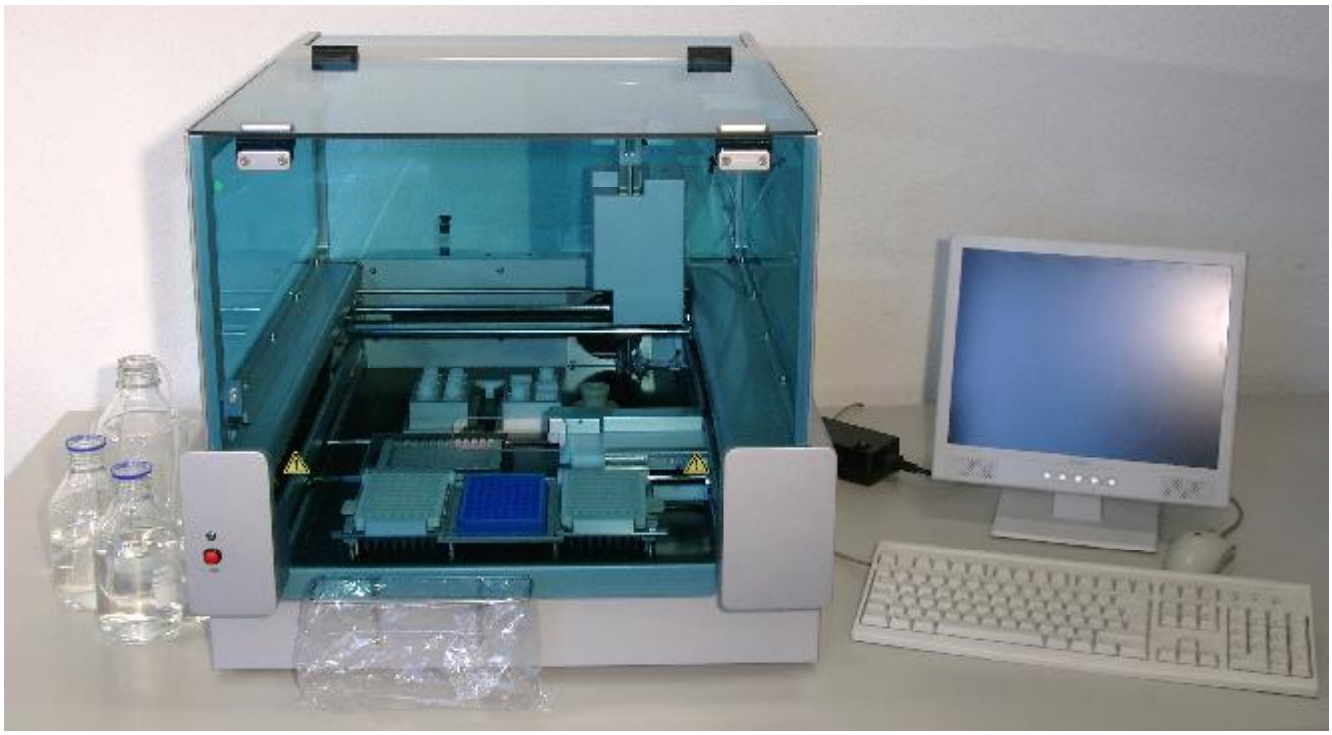
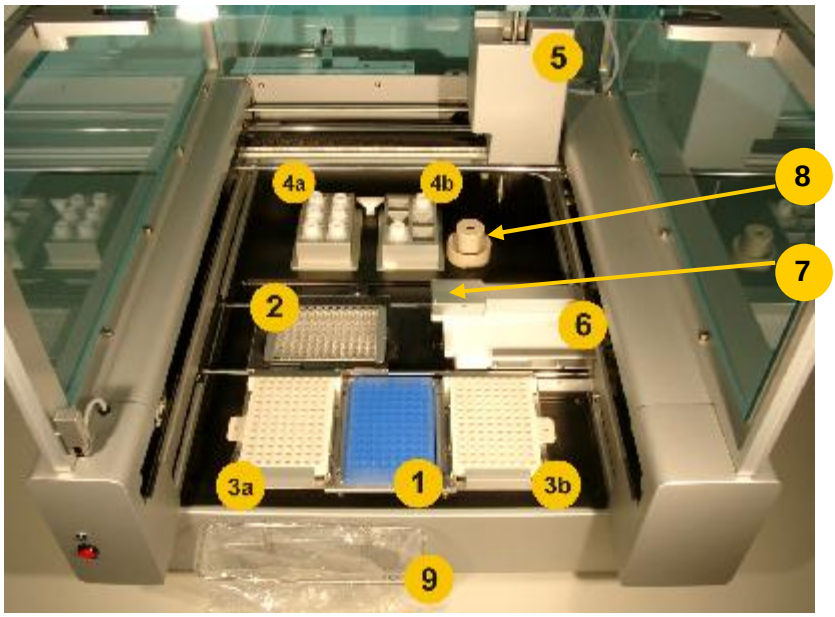


Fig. 1: Overview DynaChip™ Processor and Computer

1.2 DynaChip™ Processor Components

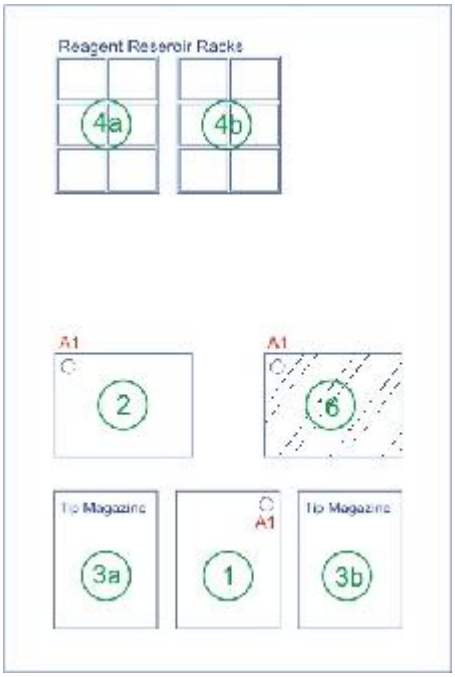


Sample plate (1), Array-Strip Frame with DynaChip™ strips (2), Tip Racks (3a&b), Reagent Reservoir Racks with Reagent Bottles (4a&b), Liquid Handling Head (5), Incubation Unit (not used in this instrument version) (6), and Reading Position (7), Wash Fountain (not in use in this instrument version)(8), Tip Waste bag (9).

Fig. 2: Detailed insight view of all DynaChip™ Processor components, for specifications see table below.

position	name & function
1	**Sample plate** - Position of Sample plate containing all samples - Capacity: 1-96 samples
2	**ArrayStrip Frame** - Aluminium microplate frame for insertion of DynaChip™ strip. - Capacity: 1-12 DynaChip™ strip - **Note:** Use only ArrayStrip frame provided with the Processor.
3	**Tip Racks** - Racks 3a and 3b containing DynaChip™ Processor pipetting tips. - Cat#889.01D - Capacity: up to 96 tips/rack - When processing 1-11 strips load one rack in position 1, if processing a full 12 strip run, a second rack is required. - **Note:** Use only specified tips with the DynaChip™ Processor
4	**Reagent Reservoir Racks** - Two racks at positions 4a and 4b each for the insertion of up to 6 reservoir bottles for reagent solutions. - Capacity: 2 x 6 containments for bottles of 20 ml nominal volume - **Note:** position 4a allows cooling of the inserted rack. - **Note:** Insert only reservoir bottles provided by Supplier.
5	**Liquid Handling Head** - Central Liquid Handling Head for all dispensing, aspirating, and pipetting steps. - The unit is connected to external wash buffer reservoir and to a waste container.
6	**Incubation Unit** - Not in use
7	**Reading Position** - Position for serial array image acquisition at the end of each test.
8	**Wash Fountain** - Not in use.
9	**Tip Waste** - Container for used tips.

1.3 Schematic Overview of main DynaChip™ Processor Component Positions



1.4 Liquid Handling Head

The Liquid Handling Head consists of the wash unit combined with separate Pipetting parts enabling to run two different modes of liquid handling during test processing (fig. 3):

1 Pipetting (5a): Dispensing and aspirating of defined liquid volumes up to 250 µl from reagent reservoirs (4a&b) or from Sample Plate into DynaChip™ strip wells (2). This part picks up pipette tips out of the tip racks (3a&b). Used tips will be discarded into the waste bag (9). (This part also moves the DynaChip™ ArrayStrip Frame into position for reading (7).)

2 Wash (5b): Washing of chips with liquids from external buffer utilising the aspirating- and dispensing channels during defined time intervals. The washing buffer is dispensed from the external wash container. The removed liquid is discarded into external waste container with aspirator channel.

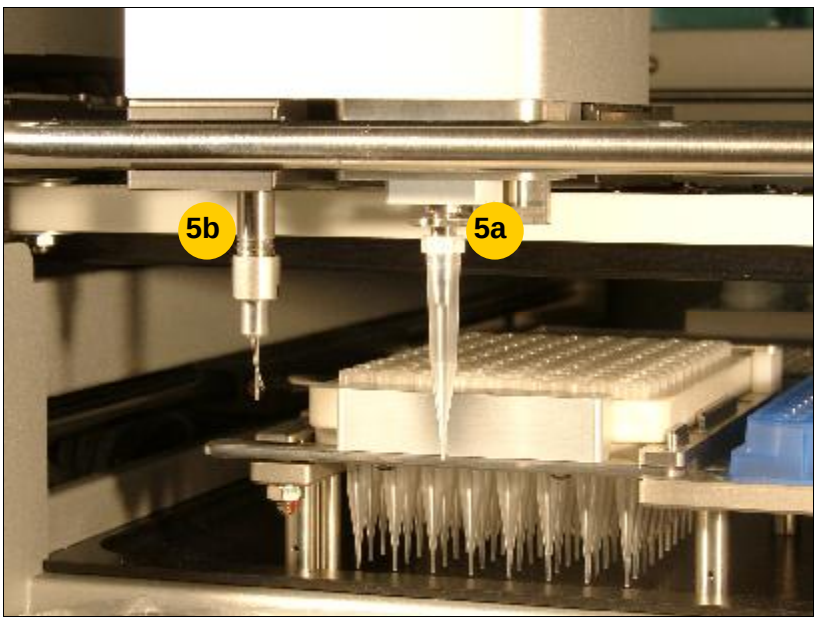
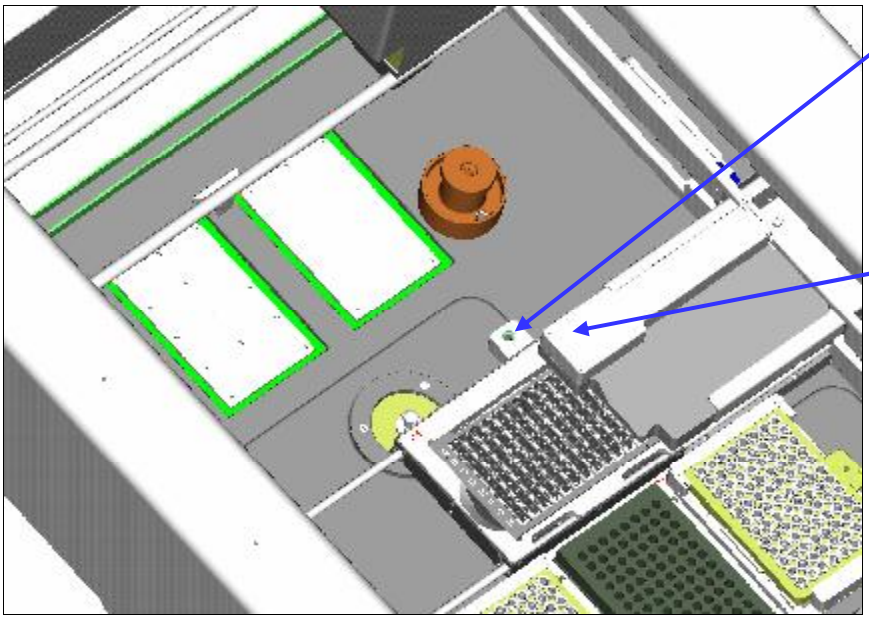


Fig.3: Liquid Handling Head: Wash part (5b) allows simultaneous aspirating and dispensing of solutions Pipetting part (5a) runs pipetting steps.

1.5 Additional DynaChip™ Processor functions

For several DynaChip™ Processor processing steps, the Sample Plate needs to be moved in XY-directions: during these steps, the Pipetting part of the Liquid Handling Head (Fig.2, 5a) (without applied tip) is docking into the magnetic holder of the ArrayStrip Frame (figure below) enabling the XY-movement for the following functions:

- For array image detection at the end of a test, each well of the ArrayStrip Frame is moved into reading position ((7) see Fig. 2).



a) Adapter for insertion of the Pipetting part (5a) enabling the movement of the ArrayStrip Frame in XY- direction along the tracks.

b) Well reading position.

Fig. 4: The ArrayStrip frame can be moved in XY direction for moving into reading position.

2 Installation

2.1 Instrument Unpacking & Setup

<u>Unpacking</u>

- To unpack the DynaChip™ Processor instrument, the transportation box needs to be in an upright position to open. The DynaChip™ Processor instrument needs at least 600 mm x 800 mm space and a safe and stable standing position at bench level. (**CAUTION!** Heavy weight of approx. 30 kg!) The DynaChip™ Processor lid swings upwards, when opened, the height is 970mm from the instrument base to the top of the lid.
- Carefully lift and place the DynaChip™ Processor in position. (**CAUTION!** Heavy weight of approx. 30 kg!) Inspect for any obvious signs of damage and report any damage immediately.
- Ensure free ventilation of the instrument. The ventilation slots on side and bottom walls must not be covered.
- Before any further installation of instrument and computer, ensure that the surrounding temperature is ambient. Allow temperature equilibration for at least 6 hours in order to avoid condensation collecting within the instrument.
- Check level of cooling liquid. If necessary, top up cooling liquid (see paragraph 4.2).
- For transportation, the instrument is secured with transportation interlocks. Open lid and secure it with the provided fixing notches.

Carefully remove interlocks as described in the following figure:

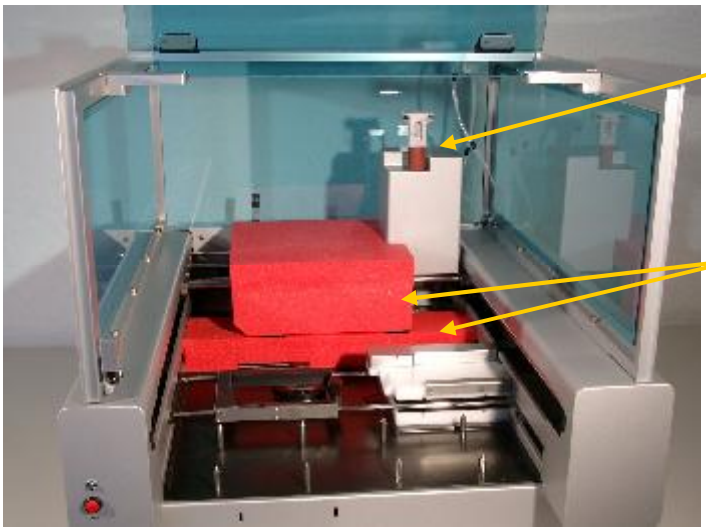


Fig. 5: DynaChip™ Processor after delivery with transportation interlocks.

In case the DynaChip™ Processor needs to be shipped back, please insert the interlocks before moving the instrument. During transportation avoid any strong impacts, which may lead to alteration of both Liquid Handling Head and Optical Unit position.

Connecting Tubing and Electricity

All electrical and tubing connectors are situated at the rear of the instrument (Fig.6).

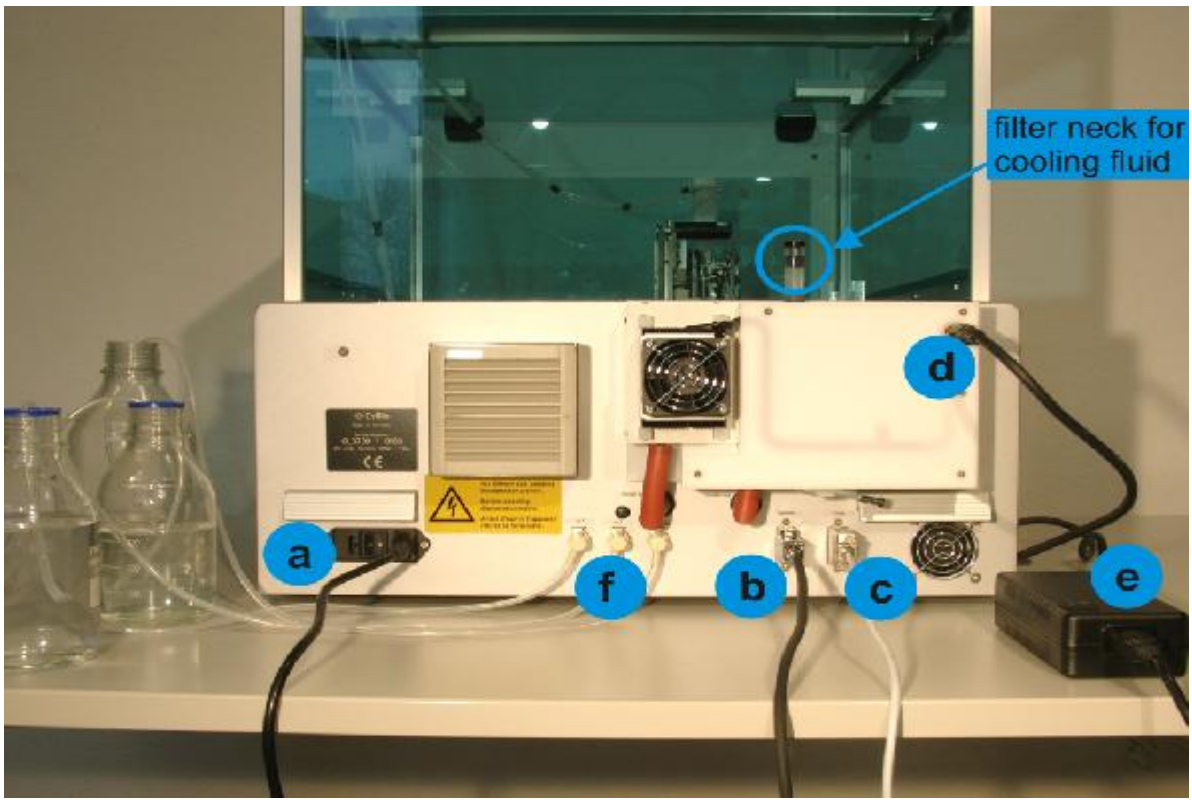


Fig. 6: rear view of DynaChip™ Processor with power connector and ON/OFF switch (a), Camera Cable connector (b), RS232 Cable connector (c), connection for Cooling Unit of Reagent Reservoir Rack (d) and Power Connector for Cooling Unit of Reagent Reservoir Rack (e), input/output connectors for Waste and external Buffer Reservoir tubing (f).

- Connect the provided power supply cable with the instrument's line connector at the rear (**a**, Fig. 5) and plug it into a power socket. Ensure that your voltage corresponds to the operating voltage of 85-230 V (AC) at 50-60 Hz, which is required for the DynaChip™ Processor.
  WARNING! The instrument must only be connected to power sockets with an operating voltage of 85-230 V (AC) at 50-60 Hz!

- To run the Cooling Unit for the Reagent Reservoir 4a of the instrument, a second power supply is required. Insert plug fixed of Power Connector (**e**, Fig. 5) into the appropriate connector of the instrument (**d**, Fig. 5), then connect this unit with a second power supply cable into power socket.
  WARNING! The power supply for the Cooling Unit must be connected only to power sockets with an operating voltage of 90-264 V (AC) at 47-63 Hz!

- Place computer next to the DynaChip™ Processor instrument. Connect appropriate power supply cable of computer with the related line connectors and plug them into a power socket.

- For communication between DynaChip™ Processor and computer, plug both camera cable (**b**, Fig. 6 or Fig.7) and serial cable (**c**, Fig. 6 or Fig 7) into the appropriate port inlets of DynaChip™ Processor instrument. Plug these cables into appropriate connectors of the computer.

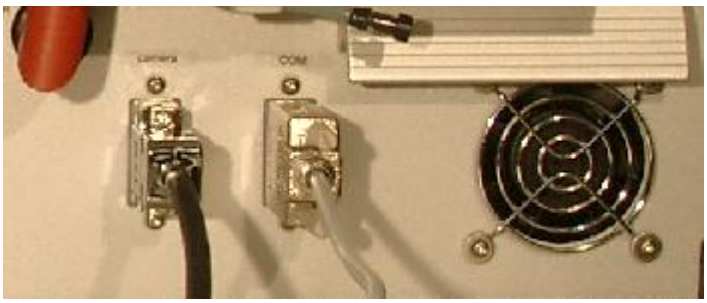


Fig. 7: plug in camera cable ('camera' adapter) and serial control cable ('COM' adapter).

2.2 Rack Installations

For delivery, the rack holding Sample Plate and Tip Racks and the two Reagent Reservoir Racks are removed and packed separately. These need to be placed into the DynaChip™ Processor after transportation (see Fig.8 below)

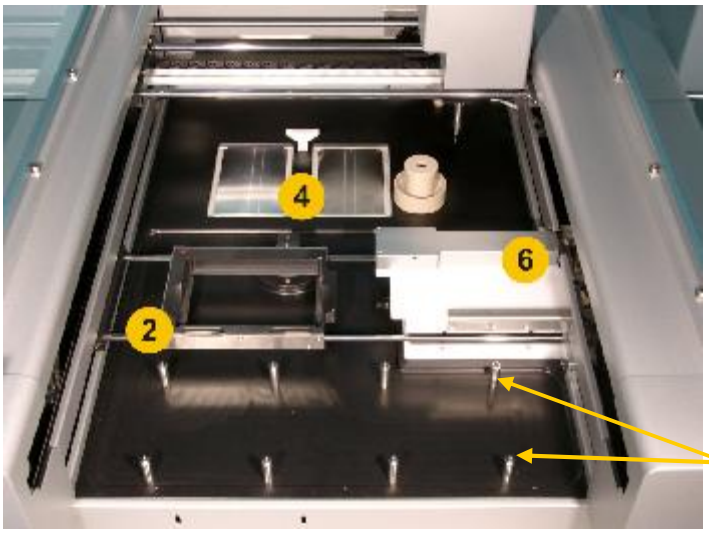


Fig. 8: View into DynaChip™ Processor after removal of transportation interlocks with installed ArrayStrip Frame (2) and Incubator Unit (6). At the rear part, the positions for the Reagent Reservoir Racks (4) can be seen, in the front part the metal pins for anchoring the Sample Plate and Tip Rack.

2.2.1 Rack holding Sample Plate and Tip Racks

Unpack tray holding Sample Plate and Tip Racks and fix onto the 8 metal pins for mounting. Insert the tray with its movable clamps facing the front side of the DynaChip™ Processor (see fig. 9). The clamps enable the secure fixing of the Tip Racks, which is necessary during processing.

Fig. 9: At the front mount the tray holding Sample Plate and Tip Racks onto metal pins and ensure that the movable clamps are facing the front of the instrument.

Loading of the tray with one or two Tip Racks can be done inside or outside of the DynaChip™ Processor (see also paragraph 3.2). For loading, open clamps and insert Tip Racks. Close the clamps to fix the racks securely into place, which is necessary during processing.

2.2.2 Reservoir Racks

- Unpack both Reagent Reservoir Racks and place them in their appropriate positions 4a&b (see also figs. 2 & 8). Make sure these are placed correctly the notched corners of the racks need to face the rear of the instrument.

Fig. 10: Inserted reagent Reservoir Racks (here already containing reservoir bottles); ensure correct positioning marked by notched corners of the racks.

Notched corners must face the rear of DynaChip™ Processor

- Attach frame for waste bags for pipette tips on front side of DynaChip™ Processor and insert waste bag.

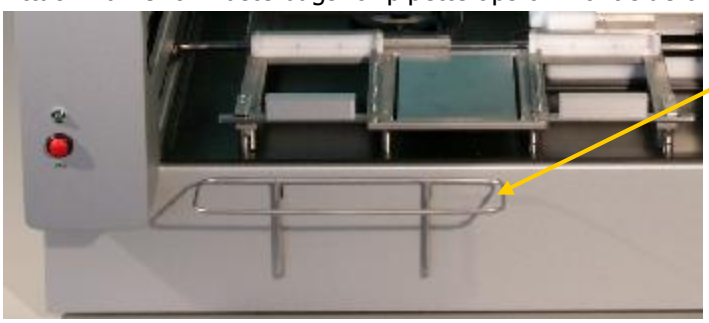


Fig. 11: Fix frame for waste bags at two slots installed at left front side of the station.

2.3 Tube Connecting

For dispensing and aspirating steps with the Liquid Handling Head, liquid is transferred to and from this head utilising two channels. The channels are linked to the external Buffer Bottle and Waste Bottle via tubing connected to the three ports at the rear of the instrument (Fig.6 (f) and Fig. 12). For the DynaChip™ processor only port In1 and Out is used.

The dispensing channel is linked to the external Buffer Bottle by the "In1" port.
The aspirating channel is linked to the Waste Bottle by the "OUT" port

NOTE: During operation, the waste port "OUT" must always be connected by appropriate tubing to an external Waste Bottle.

NOTE: Only use tubing provided with the instrument or specified according to the list in appendix 5.4.

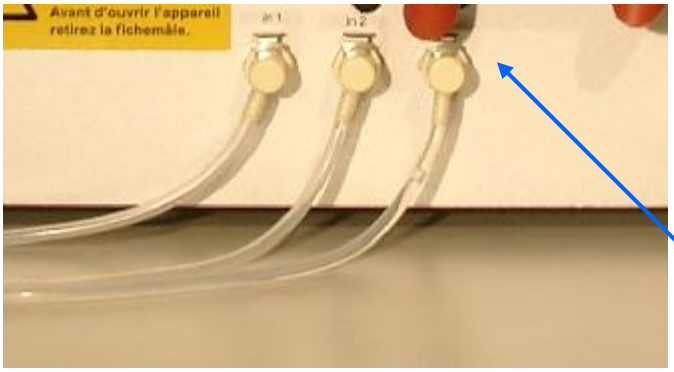


Fig. 12: Rear side of DynaChip™ Processor (see also fig. 6 (f)) with ports In1 (and In2) for the connection of external Buffer. Bottle and port OUT for the Waste Bottle.

2.3.1 External Buffer Bottles 1 & 2

For rinsing and wash steps requiring higher or repeated volumes of buffer or water, the Liquid Handling Head needs to be connected the external Buffer Bottles:

- Connect one end of provided tubing to the Inlet-1 (In1) and/or Inlet-2 (In2) on the rear side of the DynaChip™ Processor (fig. 12).
- Connect other end of tubing into appropriate external Buffer Bottle(s). The bottle should have a volume capacity of at least 1 l (e.g. 1 l glass bottle). Place tubing in Bottle to ensure continuous availability of liquid.

2.3.2 Waste Container

To dissipate the liquids of the DynaChip™ Processor aspiration steps, the Liquid Handling Head needs to be connected to an external Waste container.

- Connect one end of provided tubing to the outlet (OUT) on the rear side of the DynaChip™ Processor (fig. 12).
- Connect other end of tubing into appropriate empty waste bottle (s). The bottle should have a volume capacity of at least 1 l (e.g. 1 l glass bottle). .

NOTE: During automated processing of 12 ArrayStrips (96 samples) in one run, typical volumes of DynaChip™ Processor aspirated and discarded liquid is 0.5 - 1 l.

NOTE: Before beginning a new run, ensure that waste container is emptied.

2.4 DynaChip™ Processor Lid

Always close Lid before starting any processing program. Close Lid before launching the controlling software from the DynaChip™ Software, because after launch, the Liquid Handling Head will move as part of an initialisation procedure.

ATTENTION! Risk of Injury!

CAUTION! Do not open Lid during DynaChip™ Processor run! An alarm will sound if lid are opened during a run.

Should the Lid be opened during test procedure, all mechanical steps will automatically be interrupted, which may lead to incorrect testing and test results. If the Lid is closed within 5 minutes (300 seconds) of opening the run will continue, if not the run are aborted. For loading of DynaChip™ Processor, the opened Lid can be fixed into the grooves on the upper frame of the instrument.

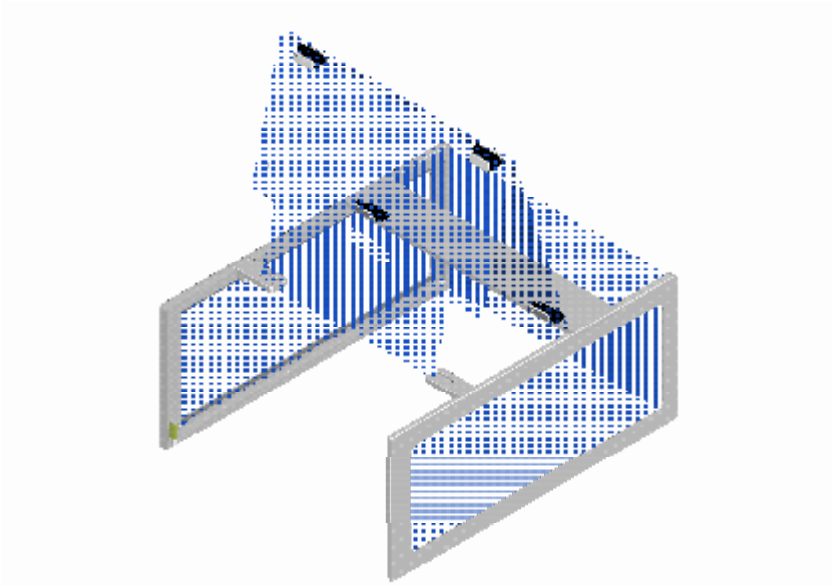


Fig. 13: Lid Illustration shows how the opened Lid can be fixed into the grooves on the upper frame of the instrument

2.5 Communication Test

The communication test is part of the DynaChip™ Processor module in the DynaChip™ software. The communication test is performed when the user launches the processor. Before launching the processor ensure that the Lid is closed (Fig. 1) and that the green LED light at the front part of the DynaChip™ Processor is lit, indicating the instrument has power and is ready for operation (Fig. 15).

If there are no communication between the computer and instrument then a dialog box will be displayed giving the options: Abort, retry or ignore.

Once communication test is completed an automated hardware calibration process will start during which the Liquid Handling Head moves into several defined XY-positions for adjustment. After calibration is completed, the unit moves into its starting position at the right hand side rear corner of the XY-stage.

NOTE: Start DynaChip™ Software only after switching on DynaChip™ Processor.

CAUTION! To immediately abort the DynaChip™ Processor, push the red **STOP** button. (Fig 15)

NOTE: The STOP button should only be used for emergency stops; this is not the power button.

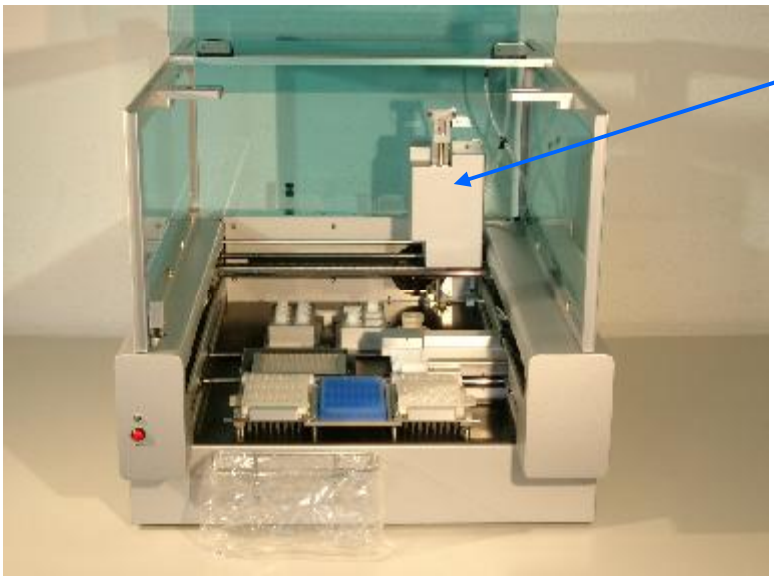


Fig. 14: Liquid Handling Head in Start position after finishing initialisation procedure.

Fig. 15: Green LED light shining after switching power ON,
The Red STOP button for immediate abortion of the DynaChip™ Processor program

3 Preparations

3.1 Tube Rinsing

If the user fail to wash the tubing and the machine was subsequently left for more than 24 hours a rinse procedure should be carried out as described in the section 4.1

3.2 Tip Racks and Tip Waste Bag

Fill Tip Racks with the number of pipette tips required for the next run to be carried out. Loading of Tip Racks can be performed inside or outside the instrument. Load one racks onto the DynaChip™ Processor by opening the securing clamps or 'gates' of the rack at front of machine and sliding them into place. Close the securing clamps/gates – there should be an audible sound as they shut. If processing 1-11 strips only one rack is required in position 3a. For a full 12 strip run, a second rack should be placed in position 3b

For information on tips for the DynaChip™ Processor, please refer to paragraph 5.3 of the appendix.

NOTE: Load tip racks only with new, unspoiled tips.

3.3 Cooling Unit

If cooling of the Reagent Reservoir Rack at position 4a is required, start Cooling Unit at least 15 min before adding any reagent bottle or starting a test run. Switch on the Cooling Unit at the rear of the instrument (see Fig.5 e). A green LED on the power supply of the unit indicates its status.

4 DynaChip™ Processor Maintenance

4.1 Tube Rinsing

Daily rinsing

Daily rinsing of all DynaChip™ Processor tubing is required for reliable test runs. First step of the script that performs the runs fills all tubing and channels with appropriate buffer. Tubing should be washed if the machine will not be used in the following 24 hours. Washing can also be carried out from the main screen of the Processor module – choose the Instrument button:

- During this pre-test procedure, tubing and channels are rinsed with the appropriate assay buffer provided in one of the external Buffer Bottles. The Wash unit (5b) of Liquid Handling Head is positioned above the right of two rear position in the Reagent Reservoir Rack (4b) to dispense and collect wash buffer.
  NOTE: Ensure that one empty reservoir bottles have been placed into both rear positions of rack 4b!

- After completion of the day's experiments and if the machine will not be used in the following 24 hours select the button that display "wash tubing". The software give instruction with what to do: Make sure that the wash bottle is filled with water. The wash procedure can also be started from the service section of the software (see software manual). Ensure that all tubings are properly inserted into the appropriate bottles.
  -and/or
  After completion of the rinsing procedure, remove tubing from Wash Buffer Bottles and start wash procedure 'dry' without the application of any buffer to allow the system to dry.

NOTE: The tubing entering waste container must stay inside the container to collect remaining liquids.

(For rinsing after longer periods of a non operating DynaChip™ Processor or before changing assays, see also paragraph 5.1.)

4.2 Cooling System

The DynaChip™ Processor is provided with a separate Cooling System enabling the cooling of the Reagent Reservoir at position 4a.

Cooling Fluid
The cooling system, generally, does not require any maintenance. However, the level of the cooling fluid needs to be checked regularly. In case the level inside the filler neck is below 5 mm, additional cooling fluid needs to be added as described in the figure below**.**

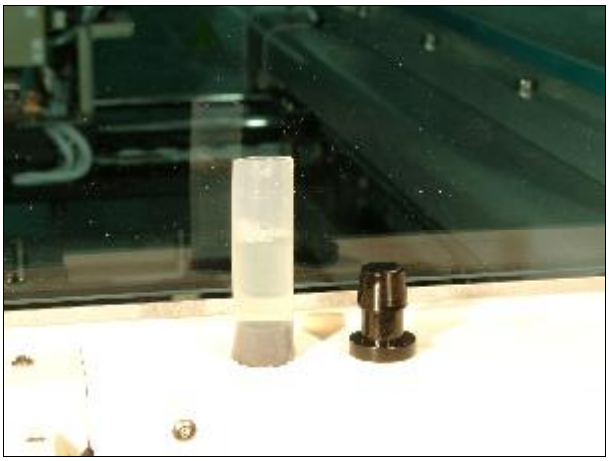


Fig.20: For filling the cooling fluid, remove black plug of the filler neck protruding from the cooling unit (see also fig. 6). Carefully fill with fluid using a syringe or pipette, until 3/4 of the visible part of the filler neck is full. Add fluid slowly to avoid foam formation. After finishing, close neck with plug.

NOTE: Please use only cooling fluid specified by Supplier.

4.3 Cleaning of Detection Window

Check detection window regularly for contamination with liquid or dust particles. For reliable array imaging, the window must be free of any lint or liquid film. Carefully clean soiled window using a soft cloth and water. Avoid touching the window with any sharp edged object.

4.4 Replacing Fuses

If replacement of one or more fuses is required, use only fuses of the type and rating specified in appendix 6.3. The fuses are situated close to the power plug next to the red ON/OFF switch. To replace fuses, open black lidded plate, remove old fuses and carefully insert new ones.

ATTENTION: Before opening lidded plate and replacing fuses, disconnect power supply!

Fig. 21: Push back spring of fuse holder by applying a small screwdriver. Holder and fuse will then be automatically released and can be removed for replacing with new fuse.

5 Trouble shooting

If you encounter difficulties with the ASP instrument, the following trouble shooting list may help to resolve them. If a solution could not be found, the gained information from these observations will help qualified service engineers to specify the appeared failure function and to solve the problem properly.

Error Description	Solution
ASP does not start.	Ensure, that instrument and control computer are properly connected and turned ON. Check, if green status LED on the front part is ON. If not, fuses might have to be replaced (refer to paragraph 4.4).
After turning ON ASP instrument, green status LED is not ON.	Ensure, that instrument are properly connected and turned ON. Check fuses. If necessary, replace them (refer to paragraph 4.4).
No communication between the computer and instrument	A dialog box will be displayed giving the options: Abort, retry or ignore. (If the user select ignore the software can be used independently of the processor, this is used for accessing the archive.) Ensure, that instrument and control computer are properly connected and turned ON. Check, if green status LED on the front part is ON. If not, fuses might have to be replaced (refer to paragraph 4.4).
Test run was aborted.	Ensure that cover has not been opened during test run. This will lead to test abortion. In all other cases, note error code and message and contact customer service for further support.
Test run was aborted by accidental pushing the red emergency	Restart ASP instrument. After its initialisation procedure, only a new test run can be started.
No results	Inappropriate liquid volume, ensure the user follow the DynaChip™ IFU. In all other cases as listed below, contact Technical Service for further support. No transfer of liquid by pipetting part during dispensing steps. No transfer of liquid or transfer of insufficient amounts of liquid during dispensing steps. No aspiration of liquid during aspirating steps. Pipettor Unit does not work properly or cannot pick up pipette tips.
No cooling of reagent reservoir rack 4a.	Control, if cooling unit was turned ON: green status LED of its power supply must be ON. Check for correct level of cooling fluid. If required, insert cooling fluid (refer to paragraph 4.2).
Failure of analysis	If image in software shows developed markers on only part of the chip or general precipitated substrate then failure may be due to inappropriate wash buffer volume. Ensure the user follow the DynaChip™ IFU.

6 Appendix

The DynaChip™ Processor is designed to be used in laboratories/laboratory environment. Only trained and authorised personnel are permitted to use the DynaChip™ Processor.

The Supplier is not responsible for any injury or damage caused by improper use of the DynaChip™ Processor. Please read the following chapter carefully to avoid any misuse.

6.1 Safety Information:

- The DynaChip™ Processor was developed considering EU standards EN 55011, EN 61000-6-2, EN 61010-1. It complies with the following standards of the EU: 89/336/EWG and 73/23/EWG
- Please observe the following caution labels located on the DynaChip™ Processor:

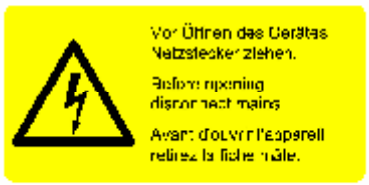


Plate at rear of instrument:
Disconnect mains before opening any closed part or casing of the instrument.

Warning sign on DynaChip™ Processor Lid:
Consider all safety notes, when opening DynaChip™ Processor Lid.
Risk of injury by bruising.

- Load instrument only with components and consumables specified in appendix 5.3 and specified by your Supplier. Do not insert any other plates than ArrayStrip Frame and microtitreplates authorised by SUPPLIER.
- Do not use any flammable, explosive, or corrosive material in combination with the device or its components.
- **WARNING:** Device is working using electrical current. Do not open instrument casing or modify outside of descriptions in manual
- The application of other hazardous or infectious material is in full responsibility of the user.
- **WARNING:** During instrument operation, do not open Lid and do not perform any operations inside DynaChip™ Processor working area. **RISK of bruising!**
- **CAUTION:** Do not touch incubator unit. Hot surfaces!
- **NOTE:** Only devices cleared with a decontamination certificate as attached on the end of this manual will be accepted for inspection and service.

Electrical Power

- The DynaChip™ Processor is licensed for an operating voltage of 85-230 V at 50/60 Hz. Do not run instrument at any other operating voltage!
- The external Cooling Unit is licensed for an operating voltage of 90-264 V at 47/63 Hz. Do not run instrument at any other operating voltage!
- Connect instrument and external Cooling Unit only with the provided power supply cables to a power socket with a protective conductor (earth/ground).
- Apply only cables and connectors without any defect and which are not twisted.

The right Environment

- Before unpacking the reader, ensure that the temperature of the reader has reached room temperature in order to avoid condensation collecting within the reader. Allow temperature equilibration for at least 6 hours.
- The instrument was designed for use in a laboratory environment. Keep free of dust, harsh and explosive solvents and acidic vapours.
- Protect the instrument against humidity $\geq$ 85%.
- Avoid direct sunlight and vibration.
- Ensure free ventilation of the instrument. The ventilation slots on side and bottom walls must not be covered.
- It is not allowed to use device within explosive atmosphere.
- The DynaChip™ Processor needs a safe and stable standing position at bench level.
- The DynaChip™ Processor Workstation is designed to work properly only if the surrounding room temperature is between 15° - 35°C (59° - 95°F).

Important Operation Notes

- Do not open any of the closed parts of the instrument or the casing. Any damage resulting from improper use will result in the loss of Warranty rights.
- Avoid any contamination of the Optical Unit of the instrument with liquids.
- Do not move ArrayStrip Frame by hand.
- Load only new unspoiled/unused pipette tips.
- If DynaChip™ Processor is not in use, always keep the lid closed to prevent dust particles from collecting inside the optical components.
- For transportation use only the original DynaChip™ Processor wrapping.
- Please turn off DynaChip™ Processor, when not in use.

Warnings

To avoid any damage and injury, the DynaChip™ Processor must be switched off immediately in case of:

- abnormal noises
- smoke or the smell of fire
- if the power supply cable is damaged
- if liquid entered the instrument.

Immediate switch-off is performed by pushing the red STOP bottom on the front of the instrument.

Please inform the customer service, if any of these incidents have occurred.

6.2 Technical Details

DynaChip™ Processor

Components	
Liquid Handling Head	XY-Unit with separate DynaChip™ Processor Aspirator and Dispenser channel and Pipetting part
Incubation Unit	thermoelectric heating
Detection Unit, pixel resolution	752 x582
Camera Interface	camera SUB-D, 15-pole
Computer Interface	RS232 C, SUB-D 9-pole
Computer	
Processor	
Disk Space	160 GB IDE
RAM	at least 512 MB
Operating System	MS Windows XP Pro
Environmental	
Operating Temperature (OT)	15° - 35°C (59° - 95°F)
Incubator Temperature	OT - 70°C (OT - 158°F)
Cooling Unit, minimum temperature	10°C
Storage Temperature	-10°- 50°C
Relative Humidity	no relative humidity leading to condensation within device
Sunlight	No direct sunlight
Method of Disposal	at the responsibility of the Supplier's customer
Usage	commercial
Altitude	up to 2000 m
Power DynaChip™ **Processor**	
Supply	85 - 230 V (AC), 50 - 60 Hz
Consumption	375 W / T10A
Fuses	Delay fuse 5x20 mm 10 A
Power Cooling Unit	
Supply	100 - 240 V (AC), 47 - 63 Hz
Consumption	65 W max
Physical	
Dimensions	width x depth x height: 588 x 770 x 563 mm height with opened lid: 970 mm
Weight	approx. 30 kg

6.3 Accessories and Disposables

Accessory	Specifications	Supplier
DynaChip™ Processor Reservoir Bottles	20 ml nominal volume	Only bottles provided by Supplier
DynaChips	8 well strips for inserting into ArrayStrip Frame	SUPPLIER
Sample Plates	96 well microplates, tested and authorised by Supplier	NUNC, U96 PP-0.5 ml, catalogue-no. 267245 (please contact Supplier for plates from other Suppliers)
DynaChip™ Processor Pipetting Tips	250 µl nominal volume, capacity of 96 tips/rack	CyBio AG, Germany, cat. no. OL 2001-25-300 IVGN Cat #. 889.01D
Tubings for external Reservoirs and Waste Container	Silicone tubing with Ø1,6/Ø3,2mm inner/outer diameter, 120 mm in length	Novodirect D71558
Cooling Fluid	cooling fluid based on propylene glycol, 30%, with corrosion inhibitor	local Suppliers
Fuses	Delay fuse 5x20 mm 10 A	local Suppliers

6.4 Warranty Disclaimer

SUPPLIER warrants that the supplied products meet the specifications contained in the technical data sheets and the specifications stated in the manuals. SUPPLIER warrants that its products are of good quality and suitable for normal use. SUPPLIER's obligation and the purchaser's exclusive remedy under this warranty is limited either to replacement, at SUPPLIER's expense, of any products, which shall be defective in manufacture, and which shall be returned to SUPPLIER, transportation prepaid, or at SUPPLIER's option, refund of the purchase price. Claims for merchandise damaged in transit must be submitted to the carrier. This warranty shall not apply to any products, which shall have been altered outside SUPPLIER, nor shall it apply to any products, which have been subjected to misuse or mishandling. A Warranty for a period of one year is valid for all parts besides wear and tear parts and consumables. ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR STATUTORY, ARE HEREBY SPECIFICALLY EXCLUDED. IN NO EVENT SHALL SUPPLIER BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Decontamination Certificate

Institute Name & Address _____

_____

Instrument Serial No. _____

☐ This instrument has not been in contact with blood, other body fluids, or any infectious sample material. It has not been used in an invasive procedure.

☐ The instrument has been cleaned and decontaminated in preparation for inspection, service, or repair.

The decontamination procedure is as outlined below:

_____

_____

☐ The instrument could be contaminated. The nature of risk and safety precautions to be adopted are as follows:

_____

_____

_____

Signed:_____ Date:_____

Position:_____

Address:_____

Tel. No.:_____

CONTACT DETAILS

For country-specific contact information visit our web site at

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