

**PRECISION COMFORT, QUICK-CLEAN STANDARD,  
VALVE CORE AND EURO-STYLE SYRINGE**

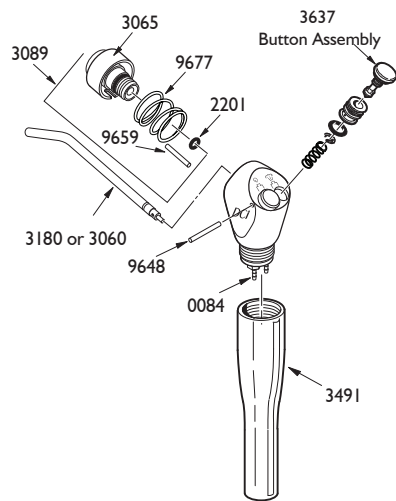
Models: 3600, 3430, 3470, 3450

## OVERVIEW

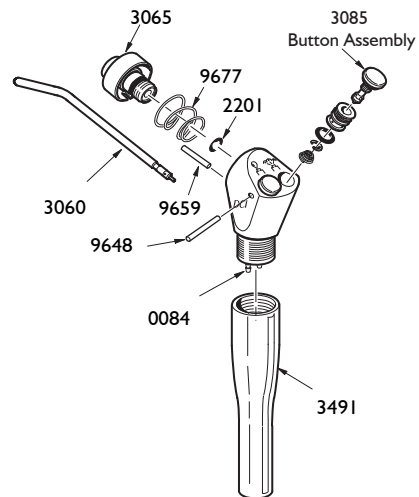
DCI 3-way syringes are designed for professionals in the dental industry to supply air and water to the oral cavity during dental procedures for rinsing purposes. It is operated by depressing the air, water or both buttons simultaneously to precisely deliver water, mist or dry air for rinsing, cooling or drying the preparation area.

This document applies to the following PNs:

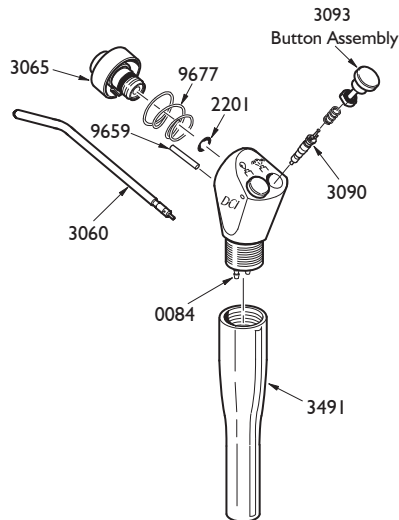
Model	PNs
3600	3600, 3601, 3602, 3603, 3604, 3605, 3606, 3607, 3608, 3609, 3610, 3615, 3616
3430	3428, 3429, 3430, 3436, 3437, 3438, 3439, 3440, 3441, 3442, 3443, 3444, 3445, 3430-I, 3434-I, 3448-I
3470	3470, 3474, 3475, 3477, 3478, 3479, 3481, 3484, 3046-I
3450	3450, 3457, 3459, 3463, 3464, 3450-I, 3451-I, 3461



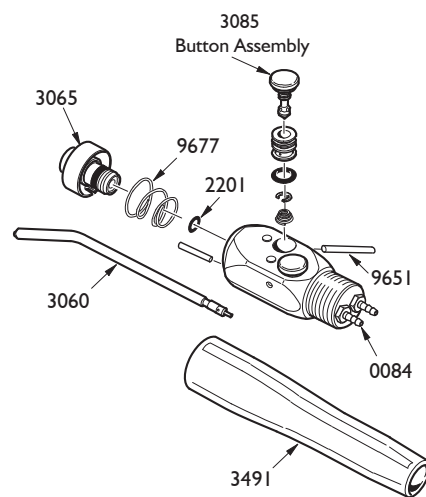
**Model 3600 Precision Comfort Syringe**



**Model 3430 Quick Clean Standard Syringe**



**Model 3470 Quick Clean Valve Core Syringe**



**Model 3450 Quick Clean Euro Style Syringe**

## OVERVIEW

Table 1: Syringe Parts

PN 0084	8-32 Barb & Washer	(Pkg. 10)
PN 2201	O-Ring	(Pkg. 12)
PN 3060	Syringe Tip	(1 ea.)
PN 3180	Syringe Tip Indexing	(1 ea.)
PN 3061	Syringe Tip	(Pkg. 5)
PN 3181	Syringe Tip Indexing	(Pkg. 5)
PN 3059	Syringe Tip	(Pkg. 50)
PN 3182	Syringe Tip Index	(Pkg. 50)
PN 3065	Tip Adapter Assembly	
PN 3085	Button Valve Assembly	
PN 3093	Button Assembly, QC Syringe	
PN 3637	Button Valve Assembly	
PN 3090	Valve Core	(Pkg. 10)
PN 3491	Handle, Quick-Clean Syringe	
PN 9648	Pin, Quick-Clean Syringe Button	
PN 9651	Pin, Euro-Style Syringe Button	
PN 9677	Spring, Tip Adapter	

US Patent No.: 5,125,835, 5,199,871

# INTRODUCTION

## SYMBOLS

The following symbols may be used throughout this product manual:



**WARNING:** Failure to carefully follow the described procedure may result in damage to the equipment or the operator.



**CAUTION:** Failure to carefully follow the described procedure may result in damage to the equipment.



**NOTE:** Take note of additional important information. Not a warning or caution.



Manufacturer



Manufacturing date



Conforms to applicable European Directives (Essential Requirements)



Non-sterile



Advisable to consult accompanying documents



Medical device



Unique Device Identifier



Steam autoclave temperature for sterilization

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## GENERAL INFORMATION

### INTENDED APPLICATION AND USE

DCI 3-way syringes are designed for professionals in the dental industry to supply air and water to the oral cavity during dental procedures for rinsing purposes. It is operated by depressing the air, water, or both buttons simultaneously to precisely deliver water, mist or dry air for rinsing, cooling or drying the preparation area.

### PRODUCT IDENTIFICATION

The product label and direct markings on the device provide essential information such as the model number, lot number, and unique device identifier, which can be used to identify the device. Note the **sample** label at right.



### APPLICABLE MODEL

3430, 3450, 3470,  
3600

### TECHNICAL DOCUMENTATION

The manufacturer will make available upon request circuit diagrams, component part lists, descriptions, and calibration instructions to technical personnel responsible for the installation and service of this equipment.

### AIR AND WATER SUPPLY

AIR	WATER
Air Quality: Dry and clean	Water Quality: Potable
Pressure: 80-105 psi	Hardness: 7.2 - 7.8 pH
	Pressure: 40-80 psi

### PRODUCT DISPOSAL

Contact your local, authorized dealer for disposal of this device to ensure compliance with your local environmental regulations.

### ENVIRONMENTAL CONDITIONS

Operating Conditions:  
 Temperature: 67-76° F  
 Humidity: 20-60%

Shipping conditions:  
 Temperature: -68 - 122° F  
 Humidity: 10-90%



**NOTE:** Scan the engraved Unique Device Identifier (UDI) data matrix on the syringe using any data matrix reader or with your phone using standard off-the-shelf apps for data matrix reading.

## INSTALLATION

Turn off the air and water supplies. Determine which of the syringe tubes leads to the air button and connect that tube to the air outlet on the dental unit or syringe manifold. Connect the other tube to the water outlet. For circulating syringes, the third tube is the return water, and is routed to the drain. Maximum operating pressures: Air 80 psi, Water 40 psi. DCI dental units use a manifold block to which the tubing from the syringe gets attached. Supply lines going into the block are: Red or Blue tubing for water and Gray or Yellow for air.



**NOTE:** Verify installation by pressing the syringe buttons; ensure water is supplied when pressing the water button and air is supplied when pressing the air button.

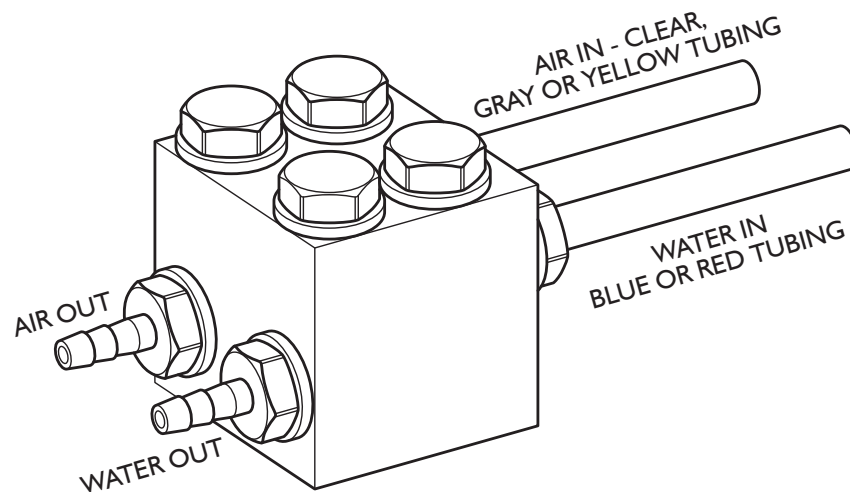


Figure 1: Output Details

## OPERATION

### CONTROLS

The syringe head is imprinted with symbols indicating the button functions. The button on the left is water, and the one on the right is air. Press both buttons simultaneously for steady uniform water spray.

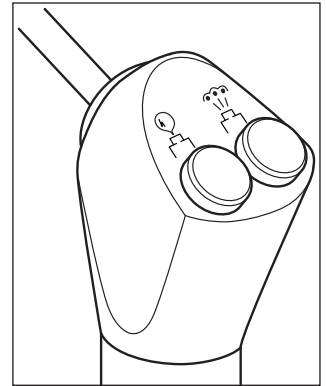


Figure 2: Water and Air Symbols

### CHANGING THE TIP

A sterile syringe tip should be installed for each patient. To prevent contamination, sterile tips should be handled with a sterile gauze pad. To remove the syringe tip, press down on the large collar. When you feel a soft “click”, the tip may be pulled straight out. Hold the collar down and insert the new tip. Be sure to press it all the way in, and then release the collar.



**CAUTION:** Syringe tip may eject if it is not properly installed. Test the installation by giving a firm pull on the tip to assure that it is inserted all the way, and that the locking mechanism is fully engaged.



**WARNING:** Use only DCI syringe tips in DCI syringes. DCI syringe tips are designed for use with DCI syringes. Syringe tips manufactured by a company other than DCI may not properly lock in place, potentially resulting in syringe tip ejection or impaired performance. Tip ejection may result in ingestion or aspiration of the tip requiring immediate medical attention.

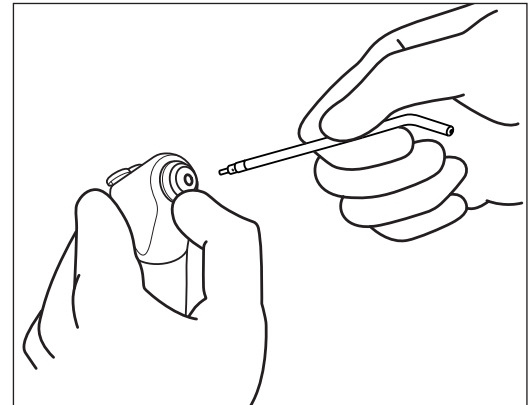


Figure 3: Changing the Tip

### ASEPSIS



**WARNING** Follow proper CDC Guidelines for Infection Control in Dental Health-Care setting for proper personal protective equipment to prevent cross contamination.

DCI dental syringes are considered a noncritical item. Use disposable barrier protection or a hospital disinfectant to disinfect the syringe between each patient or when the barrier has been compromised. When visibly contaminated with blood or other potentially infectious materials, an EPA-registered hospital disinfectant with a tuberculocidal claim should be used.

Syringe tips are considered semicritical and must be sterilized after use.

## CLEANING, DISINFECTION AND STERILIZATION

### CLEANING

Clean the external surfaces of the syringe using a solution of mild detergent and warm water. A soft-bristled brush may be used to clean around the buttons and tip collar.

Thoroughly rinse the syringe with clear water, then dry with a clean, soft, lint-free cloth.

### DISINFECTING

The use of an EPA-registered hospital disinfectant is adequate. Follow disinfectant manufacturer's instructions for use when disinfecting syringes.

### STERILIZATION

The Quick-Change syringe tips should always be replaced with sterile ones before each patient.

Before sterilizing:

Clean syringe tips under running water for 30 seconds with a soft brush and place in an ultrasonic bath with an enzymatic cleaner to remove superficial debris prior to sterilization; any debris may reduce the effectiveness of the sterilization. Sterilization process is by steam autoclave.



Parameters:

For wrapped syringe tips: 132°C (270°F) for 15 minutes at temperature with a 30-minute drying time when using a gravity displacement autoclave.

Parameters for unwrapped: 132°C (270°F) for 3 minutes at temperature when using a gravity displacement autoclave.



**CAUTION:** Do not use powdered cleansers, scouring pads or abrasive scrubbers on any of the painted, plastic or metal surfaces of this dental delivery system. To remove dried-on material, use a soft bristled brush and a solution of mild detergent.



## MAINTENANCE

### LUBRICANT

Use only silicone-based lubricant, DCI PN 8032, to lubricate syringe button assemblies and all other O-rings in the syringe.



**CAUTION:** The use of other types of lubricants may cause O-ring deterioration, resulting in syringe malfunction or failure.

### REPLACING THE BUTTONS



**NOTE:** Before removing buttons, turn off the dental unit to turn off the air and water supply. Bleed pressure from the system by running a handpiece or depressing the air/water buttons on the syringe while pointing the tip into a container to capture residual water from the system.

#### FOR PRECISION COMFORT, QUICK CLEAN, CONTINENTAL SYRINGES

Depress the air and water buttons and hold. Use DCI syringe tool (PN 9287), or similar tool, to push the dowel pin retaining the buttons and once exposed on the opposite end pull it out. Slowly release the buttons.

#### FOR VALVE CORE SYRINGES

Use DCI tool PN 8059, tongue depressor, or similar item to gently pry the button out of the syringe head. Be careful not to lose the compression spring that is located beneath the button.

Replace button and/or O-rings as necessary.

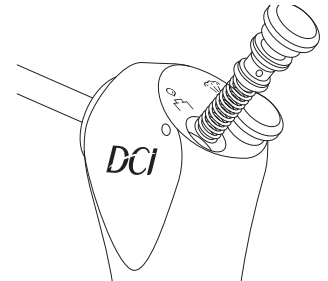


Figure 4: Removing buttons

## MAINTENANCE

### TIP ADAPTER & COLLAR

Remove the syringe tip, and then use the hex key furnished with the Autoclavable Syringe Repair Kit to unscrew the tip adapter. Remove the adapter, collar and spring from the syringe body.

Use a dental pick or similar tool to remove the tiny O-Ring from the bottom of the bore in the syringe body. Be especially careful not to nick or scratch the sealing surfaces. The easiest way to install the replacement is to slip it onto the end of a syringe tip, lubricate the O-Ring, and then insert it into the bore. The O-Ring around the outside of the adapter is thin and fragile, so the new one has to be installed with care.

Before reinstalling the adapter and collar assembly, look down into the bore in the syringe body and assure that the alignment pin is in place. With the spring in place in the collar, align the slot in the collar with the pin, and then push the collar into the syringe body.

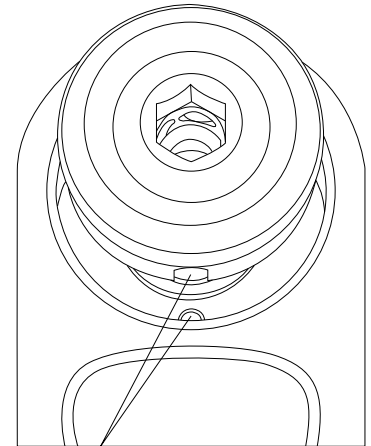


Figure 5: Aligning pin and slot in the collar



**CAUTION:** Incorrect installation of the adapter parts may impair syringe functionality. Verify Tip can be properly installed and that it locks in place by giving it a firm pull. Tips shall remain in syringe head. Verify tip can also be easily removed by pressing on the collar and pulling the tip out of the syringe head.

Use the hex key to carefully screw in the adapter. Tighten the adapter firmly (35 in-lbs torque). If you don't have a torque measuring device, hold the hex key by the short end and tighten the adapter as tight as you can. This method installs the adapter to approximately 35 in-lbs torque.

### SERVICE PARTS AND TOOLS

Use only genuine DCI replacement parts which are designed specifically for your syringe to properly function.



**NOTE:** Syringe parts that are subject to wear under normal use are provided in a syringe repair kit included with your new syringe. Repair kit includes all necessary tools to repair the syringe.

## MAINTENANCE

### TROUBLESHOOTING

The DCI Autoclavable Syringe is engineered for dependability. The troubleshooting guide gives the corrective action to be taken for the problems you may encounter.

Table 1: Troubleshooting Guide

Problem	Solution
Leakage around button	Replace button assembly.
Leakage from Syringe tip	<ul style="list-style-type: none"><li>• If water leaks, replace water button assembly.</li><li>• If air leaks, replace air button assembly.</li><li>• Replace small O-ring located behind the Quick- Change adapter.</li></ul>
Momentary or constant water spray when air button is pressed	<ul style="list-style-type: none"><li>• Replace tip.</li><li>• Replace the small O-Ring located behind the Quick-Change adapter.</li></ul>
Leakage from the syringe handle	<ul style="list-style-type: none"><li>• Verify barbed fittings are tightened.</li><li>• Replace nylon washer.</li></ul>

### STORAGE

Store in a dry, dust free location and do not mix with contaminated instruments.

Sterilized syringe tips shall be kept in a sterilization wrap or pouch to maintain sterility. Refer to the Instructions for Use from the sterilization packaging manufacturer to determine how long sterility can be maintained.

### DISPOSAL

Contact your local authorized dealer for disposal of this device to ensure compliance with local environmental regulations.

### PRODUCT SUPPORT

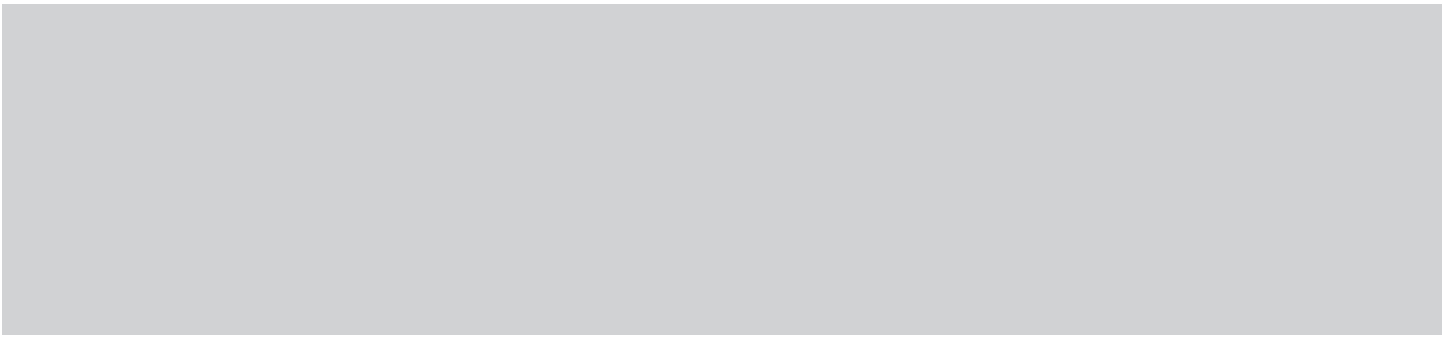
For additional product support, contact DCI Customer Service at 1(800)624-2793 or visit [www.dcionline.com](http://www.dcionline.com).

## ONE YEAR GUARANTEE

DCI has put a lot of time and effort into designing, manufacturing or selecting all the fine products we sell. Therefore we are able to fully guarantee all our products to be free of manufacturing defects for one year from time of purchase. Should product fail for any reason due to manufacturing defect, DCI will repair or replace that product at no charge to the customer. Beyond the one-year period, we still back everything we sell with service at little or no cost to you.

You are responsible for proper care and maintenance of products purchased from DCI, and our guarantee does not cover damage resulting from improper maintenance or installation, accident or misuse. The guarantee does not cover damage resulting from use of surface disinfectants not approved by DCI.

No other warranties as to merchantability or otherwise are made.



PN 92543, Rev. N, 2024-05-02

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