

# RT329 Infant Oxygen Therapy System Update

To date, infant oxygen therapy has been considered as low flow. A trend is now emerging for higher flows to be used with this therapy<sup>1</sup>. To meet this market demand, Fisher & Paykel Healthcare has introduced a new range of cannula and increased the capabilities of the RT329 Infant Oxygen Therapy Breathing Circuit. The flow parameters of the modified system are now 0.3 L/min – 10.0 L/min (cannula size dependent). This now offers the opportunity to provide optimal humidification (37 °C/ 44 mg) with traditional flows through to higher flows if required.

## BC Series Cannula Range

The most significant change to the RT329 system is the introduction of a new range of cannula. These are the BC series cannula. The increased inner and outer diameter of the cannula delivery tube (Figure 1) allows for a greater reduction in the resistance of the tube. This reduction in resistance allows for more flow to be delivered while maintaining patient safety with the inclusion of the pressure relief valve. The delivered flows of the system and a comparison of dimensions between the new BC series cannula and the existing RT/SO series cannula (RT/SO series cannula are identical) are illustrated in Table 1 below:

TABLE 1

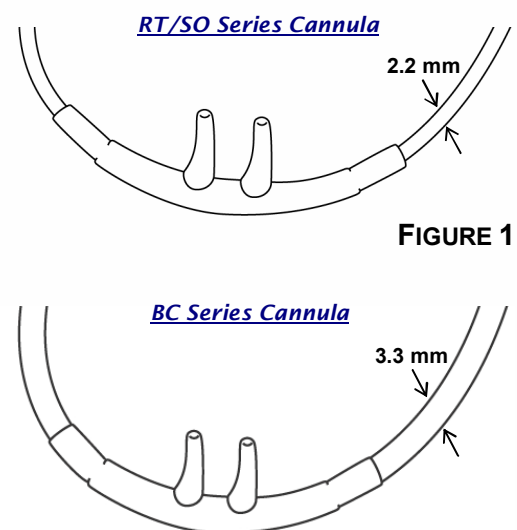
Item Code	Description	Prong Outer Diameter (mm)	Septum Width (mm)	Delivery Tube Outer Diameter (mm)	Maximum Patient Flow (L/min)
RT091	Premature	2.4	2.5	2.2	2.1
RT092	Neonatal	2.4	3.5	2.2	2.1
RT093	Infant	2.7	4.5	2.2	1.6
RT094	Paediatric	3.7	8	3.3	6.3
BC2425	Premature	2.4	2.5	3.3	6
BC2435	Neonatal	2.4	3.5	3.3	6
BC2745	Infant	2.7	4.5	3.3	7
BC2755	Intermediate Infant	2.7	5.5	3.3	7
BC3780	Paediatric	3.7	8	3.3	8

Maximum flows should be used as a guide only. Patient monitoring is recommended.

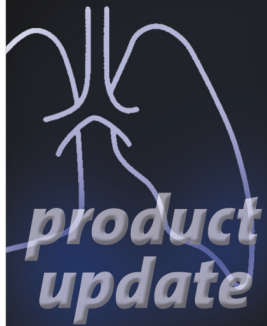
**The BC series cannula should only be used with the modified RT329 Oxygen Therapy breathing circuits. The modified RT329 circuits can be identified as having lot numbers from 060804 and with a flow range on the box/bag label of 0.3 – 10 L/min.**

If the BC series cannula are used in conjunction with the old RT329 circuit, the release pressure of the pressure relief valve will be > 45cm H<sub>2</sub>O. Please refer to the back of the RT329 instruction sheet for the cannula series compatibility and the maximum delivered flows.

The delivered flows and delivered pressures will vary if the RT/SO, BC series cannula, old or modified RT329 circuits are used interchangeably.



<sup>1</sup>Saslow JG, et al: Work of breathing using high-flow nasal cannula in preterm infants. *J Perinatol* 2006, 26(8):476-480



### **Changes to the RT329 Breathing Circuit**

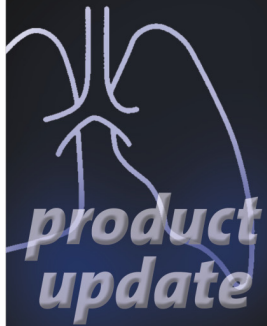
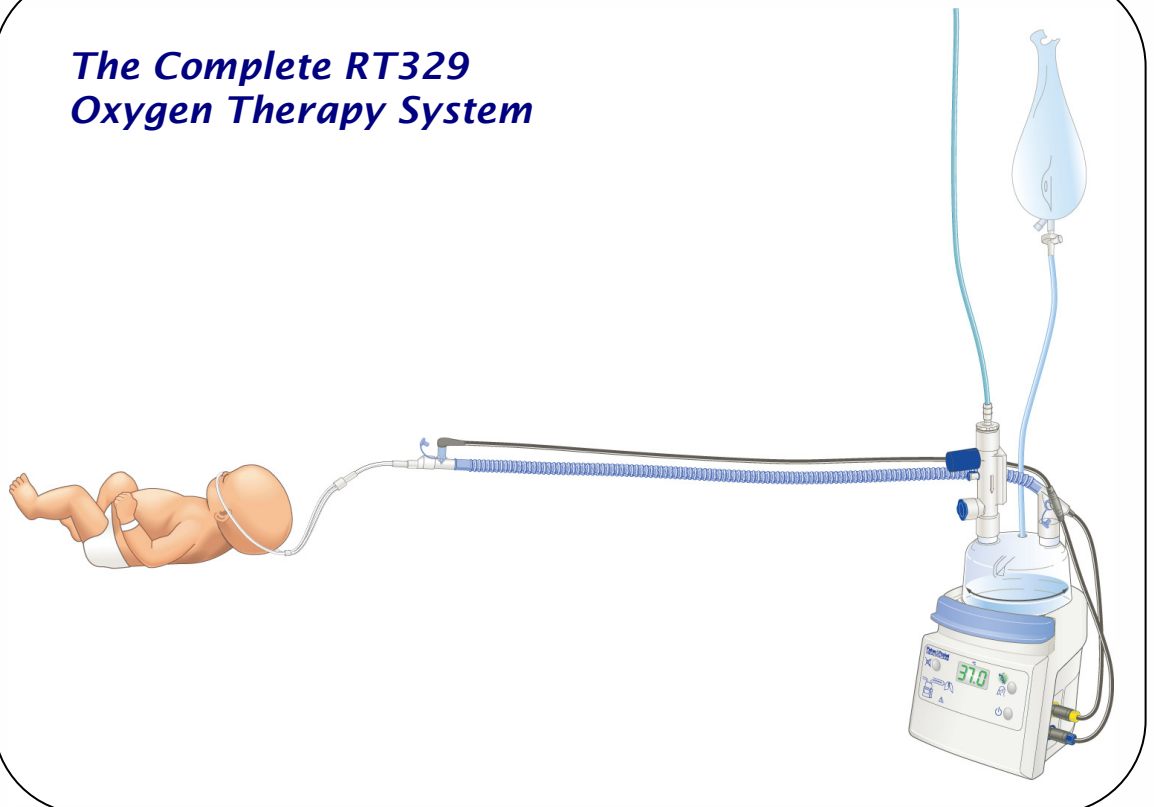
With the introduction of the new cannula range some changes have also been made to the RT329 breathing circuit. These changes are effective as of lot number 060804 and are as follows:

1. Further testing has now verified the RT329 for use with continuous flows of up to 10 L/min. The delivered flow is dependent on the cannula used in conjunction with the circuit (Table 1).
2. The pressure relief valve is now set to be < 45 cm H<sub>2</sub>O at 10 L/min. This allows more delivered flow while still maintaining patient safety.
3. The unheated extension will no longer be attached to the end of the inspiratory limb. However, it will still be included in the kit. This change has been made, as most oxygen therapy is not provided to infants in hot incubators where the extension should be used. If the extension is used with colder incubators mobile condensate may form in the extension.

### **Changeover Period**

There will be a period of time where the RT/SO series cannula, BC series cannula, old RT329 circuits and modified RT329 circuits will all be in the market place at the same time. **Please use only the BC series cannula with the modified RT329 circuits.** The RT/SO series cannula can be used with both the old and modified RT329 breathing circuits but delivered flows will vary. The modified RT329 circuits can be identified as having lot numbers from 060804 and with a flow range on the box/bag label of 0.3 – 10 L/min.

### **The Complete RT329 Oxygen Therapy System**



W W W . F P H C A R E . C O M

Respiratory

HUMIDIFICATION

REF 185044696 Rev A 2006-08 

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HEALTHCARE