

# Quick Release Snap Connector Engineering Change Notice

Date: September 2021

Page 1 of 4

## Purpose

The purpose of this technical bulletin is to inform users that AP Diving will be making an engineering change to all direct feed hose Quick Release (QR) Snap Connectors and associated inflator stems.

## Requirement

The Schrader valve type, QR connection used on buoyancy control devices has now been standardised within the European Standards to ensure male connection stems on the market are within certain tolerances, allowing safe cross connectivity between different brands.

## Products Affected

All current AP Diving rebreather QR connections (excluding AP100 or APV100 Auto Air connections) fitted to:  
**Inspiration XPD, EVP, EVO**

All current AP Diving BCD's fitted with standard inflators (excluding AP100 or APV100 Auto Air connections):  
**Commando, Explorer, Escape, Tekwing, Travelwing, Trident, Redwing & Double Gold**

## Engineering Change

The dimensional changes from the original AP Diving design to the one specified in the latest standard are very small indeed. In order that users can easily identify old and new parts the stem and QR collar have been modified visually as shown below:

### Inflator Stem



**Original AP Diving Style Stem**  
Identified by the 4 holes in the end



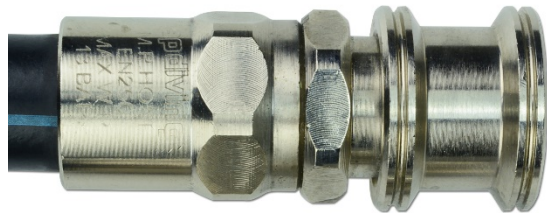
**New Style Stem**  
Identified by the rectangular bar at the end

## Quick Release Snap Connector Engineering Change Notice

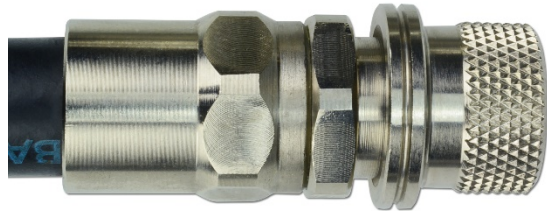
Date: September 2021

Page 2 of 4

### Quick Release Connector



**Original AP Diving Style QR Snap Connector**  
Identified by the smooth finish on the sliding collar and raised diameter at the end.



**New Style QR Snap Connector**  
Identified by the knurling on the sliding collar.

### Cross-Connectivity

We are pleased to announce that new QR connectors and inflator stems can be used safely with the original AP Diving connections without the gas flow being compromised. We have also tested the new parts on a wide range of other QR connectors and stems currently on the market, including some legacy fittings, and connection flow rates are satisfactory. Those tested have met the required flow rates.

# Quick Release Snap Connector Engineering Change Notice

Date: September 2021

Page 3 of 4

## Safety Checks

Before using any new quick release connection combination, carry out the following safety checks:

- **Check** that the QR connection fully engages with the stem. The sliding collar should rest in the fully forward position to ensure the QR connection is locked.
- **Check** that the QR connection does not pull off the stem until the quick release collar is pulled back.
- **Check** that the inflator stem is tightened into the inflator body to ensure that it does not come undone accidentally.
- **Check** the flow rate through the inflator, using the following method:
  1. Connect the direct feed hose to your BCD inflator.
  2. Turn on the gas supply. (AP Diving products are generally designed to operate with a 9 to 10 Bar supply)
  3. Inflate your BCD and record the time to reach full inflation.
  4. Look at the lift capacity of the BCD and compare it to the table below to see how long it should take to fully inflate:

Volume (Litres)	Time (seconds)
10	4.0
11	4.4
12	4.8
13	5.2
14	5.6
15	6.0
16	6.4
17	6.8
18	7.2
19	7.6
20	8.0
21	8.4
22	8.8
23	9.2
24	9.6
25	10.0
26	10.4
27	10.8
28	11.2
29	11.6
30	12.0
31	12.4
32	12.8

5. The rate of inflation rate should be within a 1 second tolerance of that stated in the table. If the inflation rate is much slower than the expected time check the connections and the serviceability of the BC inflator – if necessary, check the inflation rate with the original connections for comparison.

- **DO NOT dive with a quick release connection that fails the safety checks.**

## Quick Release Snap Connector Engineering Change Notice

Date: September 2021

Page 4 of 4

### Q&A

#### Can I change the male stem on my existing AP Diving inflators with the new one?

Yes, all inflator stems can be changed (this includes products with the BUDDY or AP Valves logo) but then you will also need to change the QR connector on the hose.

#### Can I change the QR connector on my existing AP Diving inflator hose with the new one?

Yes, hose ends on AP Diving inflator hoses are removable. The QR sliding collar and the main body assembly need to be replaced together and will be supplied assembled (items shown in the box below):



**Note:** Kits are supplied with a new hose collar as a complete hose end unit. Part Code: AP50A/INT.

**Important:** Only replace the ends if the hose is in good condition and within the recommended in-use life:

**Oxygen hose life: 5 years maximum**

**Diluent hose life: 8 years maximum**

Complete hoses are available with the new fittings if your hose needs replacing.

#### Should I change inflator stem and QR connector together?

Ideally yes, the inflator stem and QR connection should be changed at the same time. Follow the **Safety Checks** as described earlier.

#### How do I change the end fitting on my inflator hose?

A guide on how to shorten hoses can be found on the AP Diving website. This explains how to remove and refit the hose ends in detail. Please follow the link to the document location:

<https://www.apdiving.com/en/rebreathers/resources/manuals/>

>Medium Pressure & Convuluted Hose Shortening Instructions - V.1.1 – English

>Medium Pressure & Convuluted Hose Shortening Instructions - V.1.1 – French

#### Can I still purchase the original type of connection?

No, the new QR connector fits both old and new stems so will replace entirely the original QR connector.

#### How do I go about ordering the new inflator stems, QR connectors or complete hoses for my existing kit?

The QR connection and inflator stems are available on the AP Diving website: [www.apdiving.com](http://www.apdiving.com)

Or contact our sales team by phone or email.