

### A user friendly and versatile SQUEEZES-ON system:

- Donning and doffing can be done **without assistance**
- **Don** by squeezing. **Doff** by turning the Release Ring with one hand
- Use **different gloves** depending on the diving conditions
- Fits almost **any dry glove of your choice**

#### Part list, QGR:

#60231	Connecting Ring (between glove and docking surface)	(A1)	2 PCS
#60232	Release Ring	(A2)	2 PCS
#80185	O-Rings (+ spare O-Rings)	(A3)	2 PCS (2 PCS)
#60211	Spanner Ring Black – for thick gloves	(B)	2 PCS
#60212	Spanner Ring Blue – for thin gloves	(B)	2 PCS
#60233	Pressure Equalization Tube	(C)	2 PCS
#61357	Paraffin wax (for friction reduction)		2 PCS

## User's manual – Quick Glove Rings (QGR)

### Fitting the glove

Make the fitting in a clean environment as debris may harm the gloves, especially in joints. If the glove is not properly inserted it may be exposed to tear and puncture and leakage problems may occur. Spanner Rings are available in four colors with different diameters. (To obtain adequate friction between the glove shaft and the Connecting Ring you can increase the external diameter of a Spanner Ring can by wrapping it with flexible tape.)

1. Insert the Spanner Ring (B) into the glove shaft. Select Spanner Ring according to glove thickness.
2. Fold the glove shaft over the Spanner Ring. (Latex gloves can be folded the opposite way.) The sleeve length can be adjusted depending on where you locate the Spanner Ring.
3. Hold the glove (with the Spanner Ring inside) from underneath. Place the Quick Glove Ring assembly, QGR (A1-A3) with the edge of the Connecting Ring recess on top of the Spanner ring. Cup your hands over the Quick Glove Ring assembly, QGR. Use your finger tips to apply uniform pressure on the Spanner Ring. Keep the Spanner Ring and Connecting Ring **parallel**. Press the Spanner Ring **gently** all the way into the recess. The Spanner Ring will slide on the internal fabric/coating without your using excessive force.



4. Pull the glove and the QGR (A1-A3) apart to ensure proper attachment. Be careful not to harm the gloves. It is important to avoid wrinkles that may cause leakage. To undo wrinkles, push out the Spanner Ring, stretch the glove shaft over the Spanner Ring and re-assemble.

### Warning!

Before entering the water, make several attempts to attach gloves into the QGR (A1-A3) and fit the assembly into the docking system that is attached to the suit in order to get acquainted with the function. Don't use excessive force or silicone lubrication. Paraffin or saliva on the o-ring is sufficient. Test the friction by trying to pull the glove and ring assemblies apart with **moderate** strength. These are recommendations only. Test for leakage before diving and convince yourself of adequate attachment properties.



Convince yourself of proper attachment strength

### Maintenance

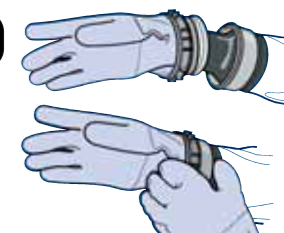
Detach the gloves from the Connecting Ring (A2) to avoid stress settings. When pushing the Spanner Ring outwards it will slide on the fabric inside the glove. Disassemble and rinse all parts thoroughly in fresh water to remove sand and dirt. Wipe all parts with a clean dry cloth before the re-assembly. Make sure that the O-ring and the groove in the Connecting Ring (A2) are clean before re-fitting the O-ring. **Note:** O-rings must be changed if damaged or contaminated by silicone lubricants.

For Trouble shooting, see page 6.

## User's manual – Quick Glove Rings (QGR)

### Donning QGR (A1-A3) to Quick Cuff or Quick Clamp

1. The QGR Release Ring (A2) **must be turned to its distinct stop** before attaching the Connecting Ring into "Quick Cuff" or "Quick Clamp". Negligence to do this before the donning may obstruct the doffing.



Note that the Release Ring is a release aid, not to be used for locking, or for attaching. Make sure the O-ring is free from lubricant that may attract dirt. Tuck away the excessive glove/liner shaft into the QGR or fold it away from the connection area.

2. Insert the Connecting Ring (A1) into **Quick Cuff** (with inserted latex cuff) or **Quick Clamp**. Make sure the rings stay parallel, or they are likely to get stuck when doffing. Use the lower part of your palm and your fingertips to press the QGR Connecting Ring into **Quick Cuff** or **Quick Clamp**. **A few squeezing hand grips** around both ring systems will be needed to make sure that all rings are completely joined.



Useful handgrips when donning QGR to Quick Cuff



Useful handgrips when donning QGR to Quick Clamp

### Don't use excessive force!

**Note.** Do not lubricate O-rings with any grease as this will reduce the friction keeping the Quick Glove Rings in place.



Make sure that all rings are completely joined

### Doffing QGR (A1-A3) from Quick Cuff or Quick Clamp

Doffing is initiated by **turning** the Release Ring (A2). This will force the Connecting Ring away from the **Quick Cuff** or the **Quick Clamp**. **A slow, firm motion** will allow the O-ring to change shape and the rings will separate after two full turns.

To doff (disconnect) effectively, (especially if you got small hands) - hold the Release Ring in a firm grip (you can hold still or turn it), in front of yourself while twisting the arm that is to be doffed (see below).



Make a fist, palm upwards, hold the Release Ring with the right hand and rotate your arm inwards/downwards. Resume start position and do it again.



Make a fist, palm downwards, hold the Release Ring with the left hand and rotate your arm upwards/outwards.

### Quick Glove Rings – glove adapter, combines with these docking systems:

- **Quick Clamp** – docking for latex seals fixed to the suit
- **Quick Cuff** – cuff seal exchange system (factory-fitted by some suit brands)
- **Quick Glove Docking Rings for rubber cuff rings** – Mainly for commercial suits with fixed rubber cuff ring



# SI TECH® "Quick Clamp" Art. No. 60930

**Quick Clamp** is the **SQUEEZES-ON** docking system for SI TECH **Quick Glove Rings**

Clamps instantly over the drysuit latex seal

Spanner rings in various colors with different diameters allows adaptation to variations in seal thickness

**Quick Clamp** and **Quick Glove Rings** are available in a COMBO SET.

GLOVES ARE PURCHASED SEPARATELY



#### Part list, Quick Clamp:

#60931 Docking Ring (meets QGR O-ring)	(D) 2 PCS
#60212 Spanner Ring Blue	(B) 2 PCS (for medium to thin seals)
#60214 Spanner Ring Yellow	(B) 2 PCS (for thick to medium seals)
#60219 Spanner Ring Green	(B) 2 PCS (for very thin seals)

**Useful info** All types of latex seals (fixed to a drysuit) can accommodate a **Quick Clamp**. (Most neoprene seals will not be compatible with **Quick Clamp**.)

**Quick Clamp** can be used for field-repair, to mend a ripped/broken seal at the dive site.

Several Spanner Rings are supplied with the **Quick Clamp** and **Quick Glove Rings** sets. Use the Spanner Ring that gives adequate resistance, but still can be removed at will. Keep your surplus Spanner Rings handy as they might prove useful later on.

Use green Spanner Ring for thin seals, blue for medium or yellow for thick seals. If the wrist seal is extremely thick (heavy duty), use the black Spanner Ring supplied with the **Quick Glove Rings** sets. The outer diameter of a Spanner Ring can be adjusted with flexible tape or Duct Tape.

## User's manual – Quick Clamp

### Assembly – Quick Clamp

1. Make sure the seal is clean and free from lubricants. Insert the Spanner Ring (B) into the latex wrist seal. Place it where it matches the seal circumference. (The further back the better.) Try to install the Spanner Ring in a straight angle to the centre line of the sleeve. Tapered seals can be tricky as the Spanner Ring is likely to slide inside the stretched seal.
2. To prevent the Spanner Ring from sliding you can tuck away the seal opening into the suit. Fix the seal and Spanner Ring from underneath before placing the Docking Ring (D) parallel on top of the Spanner Ring.
3. Cup the Docking Ring in both hands with the outer edge resting in your palms. Keep the Spanner Ring parallel to the Docking Ring. Force it a little further in with your *fingertips*. **Rotate** the Docking Ring often and **repeat**. Work segment by segment.
4. The inside of the Docking Ring is tapered, ending with a well defined edge. Try to make the Spanner Ring meet, but not go beyond the edge. If it can be pushed over the edge, use a larger Spanner Ring or wrap a Spanner Ring with flexible (or duct) tape to increase the diameter.
5. Convince yourself of proper fitting and adequate friction by pulling the Docking Ring outwards from the sleeve.
6. Use the paraffin wax supplied with the QGR set to reduce friction prior to donning the QGR (see drawing, page 6).

### Maintenance – Quick Clamp

To avoid stress settings and promote the longevity of your latex seals we recommend you to remove the Quick Clamp when storing the suit for longer periods.

After each dive: remove body fat on the seals with soap and rinse seal and Quick Clamp with fresh water. Avoid exposing the suit to high temperatures when Quick Clamp is fitted.

### Disassembly – Quick Clamp

To remove, place the sleeve opening towards yourself. Use both thumbs to push (the latex seal and) the Spanner Ring outwards, segment by segment. Make sure that the Spanner Ring remains **parallel** with the Docking Ring or else it might get stuck.

As an alternative, the seal can be pushed with the inside out.

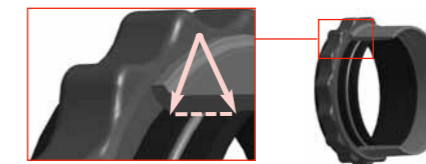
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## Quick Glove Rings – Description

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**Friction between materials** is the key feature of SI TECH's **Quick Dry Glove System**. The glove is fixed in the recess in the QGR Connecting Ring (A1) by means of an inner Spanner Ring (B). The **Quick Glove Rings** set (#60230) comes with Spanner Rings in two different diameters to provide attachment regardless of glove material thickness. **Any type of dry glove** can be used as long as they have at least one smooth external surface which allows watertight sealing. (The green and yellow Spanner Rings from the docking system **Quick Clamp** may also be used to fix the gloves.)

The O-ring (A3) seals against (D) the Docking Ring (#60931) of Quick Clamp. **Use the paraffin zip wax supplied with the QGR set on this surface** (The wax will provide an adequate reduction of the friction.)



The O-ring and the Connecting Ring must not be lubricated with silicone agent in order to maintain adequate friction. Keep the O-ring free from debris. If contaminated with silicone agent or other lubricant that is difficult to remove, all contact surfaces have to be cleansed with appropriate solvent and the O-ring has to be replaced.

The Connecting Ring has double threads to guide the Release Ring (A2). **Note** that the Release Ring is used for doffing only and should be **turned to its full stop prior to donning**. Negligence to do so may obstruct the doffing! When doffing, the Release Ring is twisted until the Connecting Ring separates from the docking system attached to the suit.

### Pressure equalization of the glove

Gloves may be punctured or torn during a dive. Therefore SI TECH recommends you to **always use a well trimmed seal when using your Quick Glove Rings** (whether in combination with Quick Clamp or Quick Cuff). The **sealing surface** of the latex seal in a Quick Cuff assembly should be minimum 1.0 mm thick.

Creating an air channel between skin and latex seal for equalization of the pressure in the glove is essential when diving deeper than 15-20 meter (50-65 ft). Use the Pressure Equalization Tubes supplied with the QGR set or a similar thread/tube, or wear the inner glove under the seal.

### Trouble shooting

**Water in the glove:** • Punctures • Glove wrinkles between A1 and B • Leakage between o-ring (A3) and the *connecting surface* (due to inadequate lubrication of that connecting surface) • Material stress in joints (due to sand, creases, too rough handling when fitting or damaging the glove by pulling)

**Release Ring stuck:** Let it rest a few seconds, then turn it very slowly. If that doesn't help, ask your buddy to hold on to the Release Ring, while you rotate your arm. After a difficult doffing, disassemble and rinse all parts in fresh water. Examine the O-ring groove in the Connecting Ring for irregularities and debris. Lubricate the *connecting surface* with the wax supplied with the QGR set.

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