



# Installation Instructions

## 00SO Stop Collars



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## Background

The function of the Stop Collar within the borehole is considered vital for the effective installation of the Centralizer and hence subsequent cementation. Therefore, it is strongly advised to use the correct equipment and installation methods.

Centek Stop Collars are generally supplied with 'Cup point socket head set screws' which are M12 dia. X 1.5mm pitch thread, with a 6mm A/F female hex socket. (See datasheet for specific set screw size)

Centek supplied screws are specially selected for thread form and pitch commensurate with design and axial holding loads. The use of non Centek supplied screws is not permitted.

### Section 1: Clearance of Stop Collars either side of a Centralizer

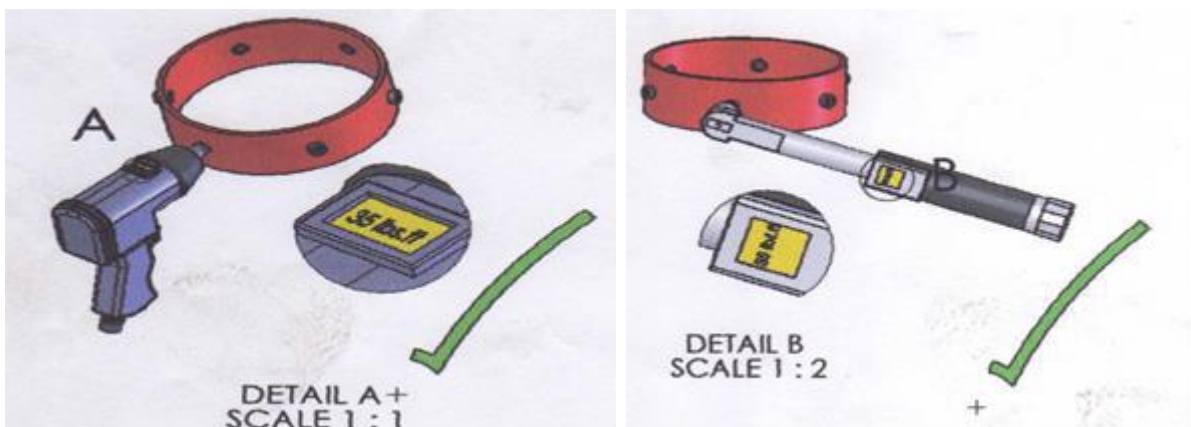
Should the Centralizer be fully compressed, its developed length must not be greater than the distance between inner edges of the Stop Collars.

#### Sizes up to and including 11-3/4" casing

It is recommended to have 3" of clearance (with a minimum of at least 1" clearance) either side of the Centralizer to the inner edges of the Stop Collar.

#### Sizes larger than 11-3/4" casing

It is recommended to have 3" of clearance (with a minimum of at least 2" clearance) either side of the Centralizer to the inner edges of the Stop Collar.



**Applying torque to 35 lb.ft. - correct tooling alternatives**

## Section 2: Correct sequence of tightening Set Screws

It is necessary to ensure uniform tightening of the screws so that the Stop Collar ring body is central to the pipe center. Common practice is to tighten all set screws to a very low torque, establishing central to pipe condition and then apply final torque in the suggested radial sequence.

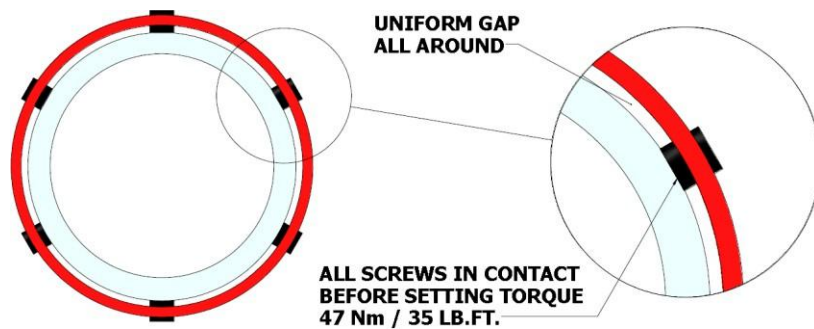
### Step 1

Inner edge of Stop Collars placed approx. 3" distance from centralizer.



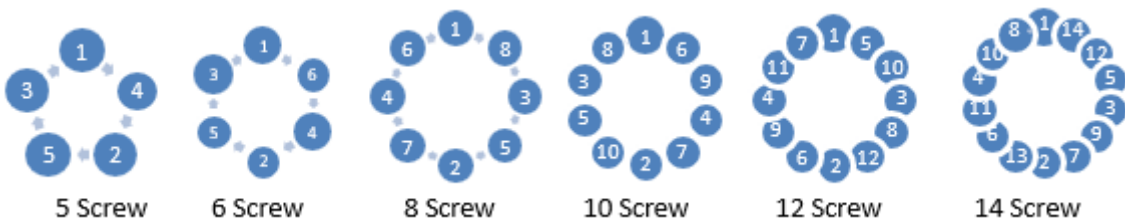
### Step 2

Set screw depth to be adjusted so collar is equal distant from casing on all sides.



### Step 3

Apply **35 lb. Ft. (47Nm)** according to the following patterns, like tightening of wheel nuts. Calibrated torque wrench is advised.



### Section 3: Pneumatic and Hand Operated Tools + Examples

#### Pneumatic Torque Wrenches

This is the preferred method of installation, following Centek Engineering investigations. We recommend that the latest generation pneumatic tool be used with positive, accurate mechanical torque control built in. Suppliers and outlets are available Worldwide which may carry out calibration services as required.

Example – typical UK Supplier

'Uryu' Pulse Tool

Model Number ULT70 with a 30-55Nm (23-41 lb. Ft.) torque range

#### Hand operated Torque wrenches (Must be calibrated)

Typical 'Snap' type wrench with clear sight window for setting of desired torque.

Example – typical UK Supplier

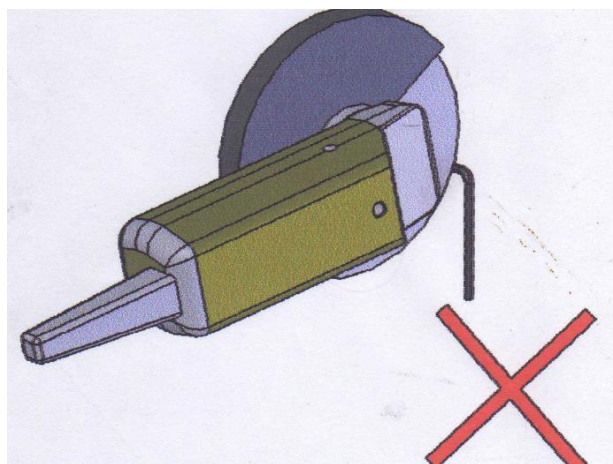
'Britool Torque Wrench'

Part. No. 651-383 – 15-75 lb. Ft. (20-100Nm) ½" A/F Square drive

'Norbar Torque Wrench'

Part. No. 2202-183196 – 0-45 lb. Ft. (0-60Nm) ½" A/F Square drive

A 6mm A/F drive key must be used with either of the above options. Do not 'cut down' regular allen keys for use in a Pneumatic or Hand Torque Wrench.





### **Section 3 cont.**

#### **The preferred drive is the Centek Part. No. SA12-HTLL high performance hex key**

The 'HEX PLUS' precision form on the hex flats allows higher torques and substantially reduced rounding of corners with resultant longer life.

DO NOT use cut off length from conventional hand 'Allen' keys that have been obtained by grinding or cutting wheel methods. This method generates sufficient heat to de-temper the keys' hardness.

Use pre/made keys of suitable length to fit securely into socket head of the torque wrench tool etc. Ensuring sufficient length protrudes for full depth location in the female hex socket of the set screws.

Typically, the keys are made from an impact resistant 'Sintered Carbide' approximately 1/2" to 5/8" long. Some grades may not tolerate side loading through misalignment to the socket screw – Centek uses a high-quality tough Chrome Vanadium hex key that gives good torque transmission and excellent tooling life.