

DETAN TENSION ROD SYSTEM

System Components

Tension Rods

Supplied with one left-hand and one right-hand thread to compliment the threaded adjustment facility in the fork connectors. Flats on the DETAN tension rod enable a spanner to be used to turn the rod on its threads. Depending on the direction that the rod is turned the length of the system is either increased or reduced within the limits of its adjustment.

Couplers

Used to join DETAN tension rods in applications requiring long spans. They also provide an additional facility for adjusting the system for length. Each DETAN coupler is provided with two locking nuts. Sizes M12 and above can be supplied with a welded lug to provide a hanger connection if required. Hangers can be used in long span applications to limit system deflection.

Anchor Discs

Another method for extending the span of the system, or can be used to provide a central connection point for structures requiring cross bracing. A maximum of eight bars may be connected to each anchor disc.

Fork Connectors

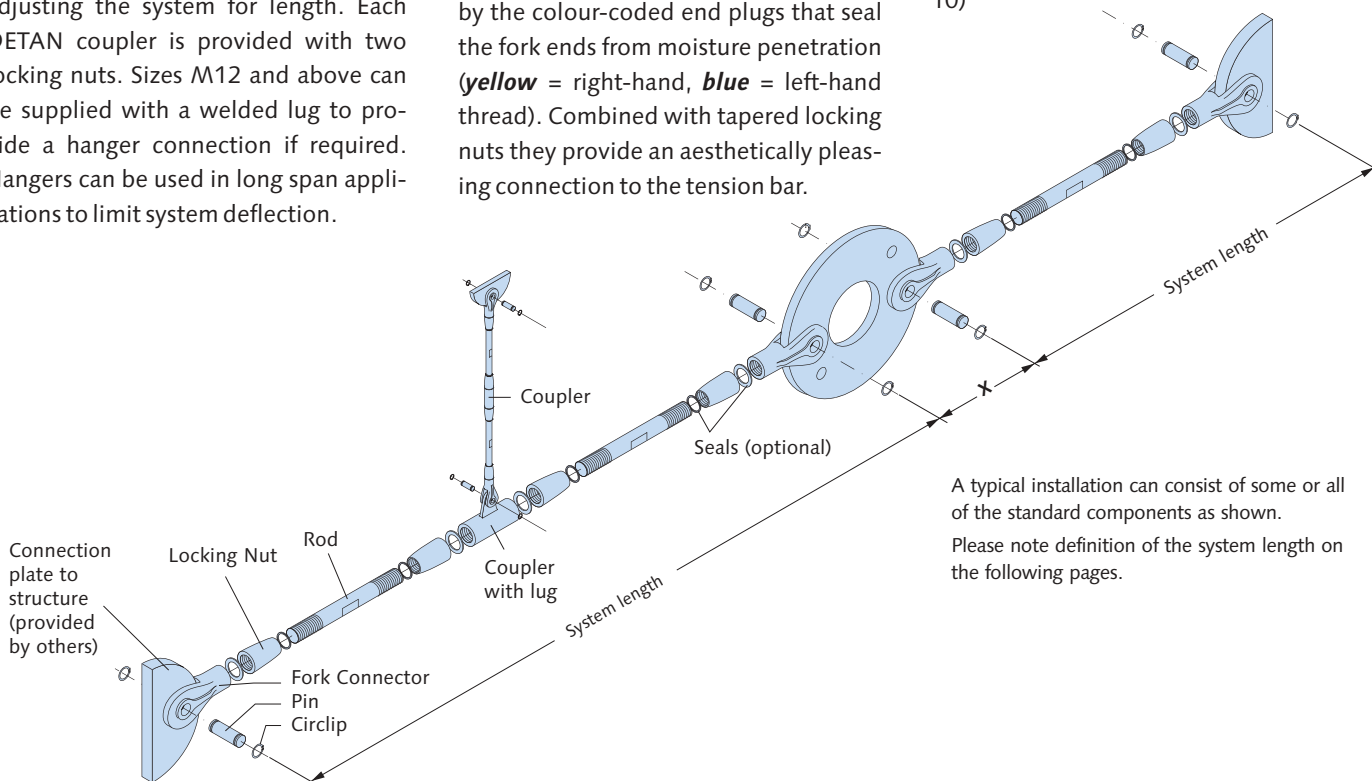
Provide an adjustable connection between the tension rod and connection plates on the structure or anchor discs. Each DETAN tension rod system has 2 fork connectors, one with left-hand and one with right-hand thread. Fork connectors can easily be identified by the colour-coded end plugs that seal the fork ends from moisture penetration (**yellow** = right-hand, **blue** = left-hand thread). Combined with tapered locking nuts they provide an aesthetically pleasing connection to the tension bar.

Each fork connector is provided with a locking nut, a pin and two circlips.

A combination of flat and round seals can be provided to special order for locking nuts M16 and above, if desired to seal the threads from the accumulation of moisture or dirt.

Locking nuts for systems M6 to M12 are tightened with soft touch pliers. Sizes M16 and above are tightened using a peg spanner.

To provide a visual safety check, the locking nut hides an indicator mark on the tension rod only when the system is within its allowable range of adjustment. (see assembly instructions, page 10)



A typical installation can consist of some or all of the standard components as shown. Please note definition of the system length on the following pages.

System Selections

Material	Rod dia [mm]	Components	Finish	System length [mm]
94 = Carbon Steel	6 - 12 dia.	000 = Rod & Connections	1 = Black *	If couplers are required their positions within the system length should be specified.
95 = Carbon Steel (S460)	16 - 95 dia.	001 = Rod, Connections & Coupler	3 = Dacromet (fork, coupler & lock nut)	
97 = Stainless Steel (S355)	6 - 30 dia.	002 = Rod, Connections & 2 Couplers	HDG (rod & anchor disc)	
		003 = Rod, Connections & 3 Couplers	5 = Electropolished Stainless	
		060 = Cast Anchor Disc (carbon steel)	6 = Hand Polished Stainless	
		061 = Machined Anchor Disc (stainless steel)		

Code examples & notes:

97-24-061-6 = stainless steel, machined anchor disc for system size 24, hand polished

97-16-001-5-7025 = stainless steel, system 16 (tension rod, fork connectors, locking nuts, pins & circlips) with coupler, electropolished, 7025mm long.

If couplers are required, their positions within the system length should be specified. Standard couplers will be supplied unless couplers with hanger connections are specified.

* Black/ Mill finish rods are used with Dacromet fork ends and lock nuts and hdg anchor discs.

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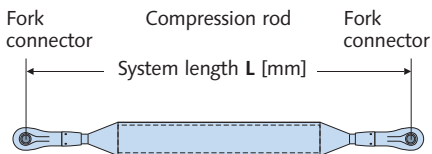
DETAN Compression Rods

DETAN Tension rods satisfy most design requirements for bracing, but occasionally there is a need for a compression member to both strengthen and stabilise the structure.

DETAN Compression Rods have been designed to fulfil this requirement, while being aesthetically compatible with the other DETAN components.

Compression rods consist of large diameter tubes, which are reduced at each end to use standard DETAN fork connectors to the structure. They are designed to order, and are available in both carbon steel and stainless steel.

DETAN compression rod, components



Connection Plates

Used to attach the system to the structure. These can be fins for welding to steelwork or T-brackets for bolting to the structure.

Care should be taken in designing the position of connection plates to ensure that the tension rod system is not subject to bending.

Cast-in HALFEN channels or drilled bolts may be used to fix connection plates to concrete structures. For design and supply of connection plates, please contact Halfen.

Arrangement of connection plates

Fig. 1

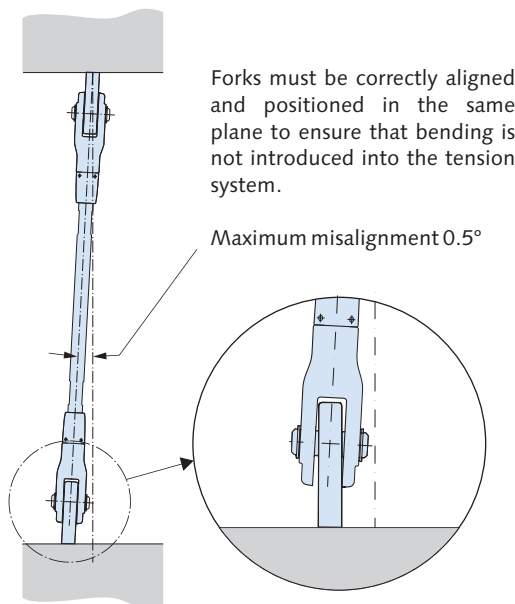
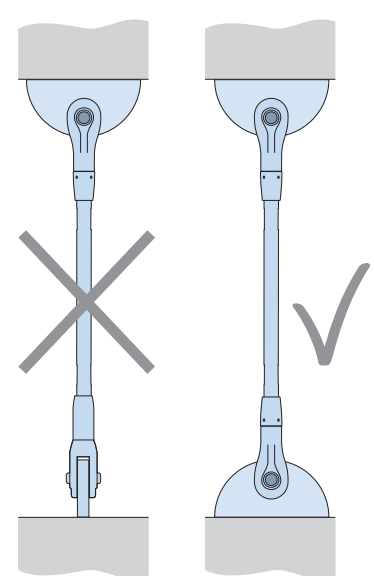


Fig. 2



Replacement Items

System Sets

- Tension Rod
- Connection set = 2 forks + locking nuts + circlips + pins
- Coupler set = coupler + locking nuts
- Coupler set with lug = coupler/lug + locking nuts
- Anchor disc

Individual Components

- Fork, righthand or lefthand thread
- Locking nut, righthand or lefthand thread
- Set of circlips (2 circlips for 1 fork connector)
- Pin
- Coupler (or Coupler with lug)
- Seals