

# SBC & CBC

Our Safety Breakaway Couplings used for LPG and our Cryogenic Break-away Couplings are based on the same reliable spring-loaded poppet design as our ordinary breakaways. The advantage of the poppet design is that there will be no problem with damaged valves seat or over rotating flip valves that could destroy the coupling if there is a release at a high flow rate or pressure. Furthermore the poppet design has a minimum of moving parts and the valves are oriented in the flow direction which makes

this valve mechanism the most robust and reliable valve concept.

MannTek always strives to make the correct threaded or flanged connection direct in the coupling body to avoid adapters or reducers that increase cost, weight and potential leakage. Our customers are free to combine any threaded or flanged inlet and outlet connection to make a perfect match to the relevant installation.

## BREAKING PIN VERSION

The Breaking pin versions are available in two different types: the industrial type that can be released at any angle, mostly used when one side is fixed, and the other side is connected to a hose. The Marine type is mostly used when there is a hose length on both sides of the breakaway, and you want to avoid an unwanted release caused by high bending forces (that is, the forces occurring when hose sections are dangling). A straight pull is the only way to release the Marine type.

The breaking force will be calculated for each demand depending on hose quality, pipe and manifold strength, accepted lateral forces from on a loading arm, working pressure etc.

## CABLE RELEASE VERSION

Both SBC and CBC are also available in a cable release version. The valve mechanism is the same as the breaking pin, but the release mechanism is based on two clamps holding the coupling halves together and a ring outside the clamps preventing the clamps from falling off. The wire is connected to the release ring and the other end should be connected to a point that will determine the distance at which the loading equipment should be able to operate. The release force is very low, and the functionality of the release mechanism is more or less

independent from lateral forces or internal pressures. The CBC has a unique ice-breaker function that will prevent ice from disturbing the release mechanism.

Our breakaways are available in sizes from 1" up to 12" and are produced in stainless steel and aluminium as standard, although, based on customer demand, many other materials are possible, such as titanium or hastelloy. The sealing material for LPG is a low temp FKM GFLT. CBCs have seals made of PTFE.



# OUR SOLUTION RANGE

DGC – Dry Gas Couplings

DCC – Dry Cryogenic Couplings

**SBC** – Safety Break-away Couplings for LPG

CBC – Cryogenic Break-away Couplings for LNG

## SBC Safety Breakaway Couplings

Prevent pull-away accidents, raising the safety level for transfer systems. Our SBC Couplings are safe, flexible and efficient. There are two types available – breaking bolt or cable release.

### + Key benefits

**EASY TO HANDLE** Easy for a single person to reset on-site. Lightweight, robust design. Simple mechanism with no loose components that could be lost after release.

**SAFE** Passive security against situations where a hose or loading arm might be subjected to inadvertent excessive loads.

**COST-EFFICIENT** Operates independently of shut-off safety system. No external power source required. Very low-loss, positive shut-off of both coupling halves results in minimal product loss.

**FLEXIBLE** High flow rate/low pressure drop. Available with ANSI/DIN flanges or threaded (BSP or NPT).

### Applications

- Ship to rig fluid transfer
- Ship to shore fluid transfer
- Ship to ship fluid transfer
- Bunkering, marine refueling



Easy installation



Calculated breaking point



Valves close on separation for minimal spillage

### BREAKING BOLT

Variation of breaking load – will be calculated for each installation.

Available in both an industrial version, with any breaking angle – and a marine version with straight pull only.

Protects line from excess pressure.

Unique low temp FKM sealing technology for all qualities of LPG and temperatures operational.

Choose inlet and outlet connections individually – any combination of connection available.

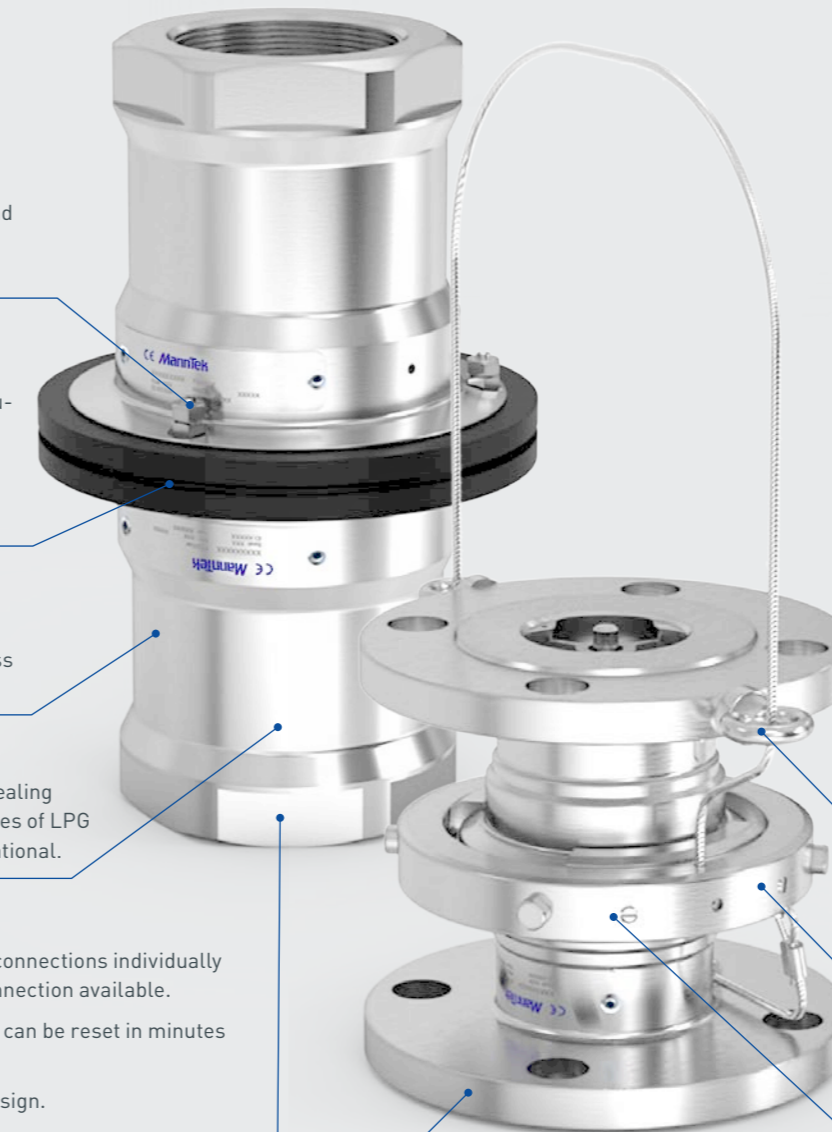
After activation, the unit can be reset in minutes without special tools.

Reliable poppet valve design.

Easy to service – no special tools needed.

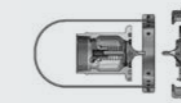
No nipples or reducers necessary – produced with a wide range of flanges and threads.

Available with integrated hose shank.



### In Service

The coupling consists of two halves, each with a valve.



### Released

After an emergency disconnection the coupling separates and both valves close immediately.

### CABLE RELEASE

Breaking force independent from line pressure and lateral force.

Withstands extreme sideload.

Low breaking force.

