## GNY SAFETY BREAK-AWAY COUPLINGS

**Shear-Pin and Collar Designs** 



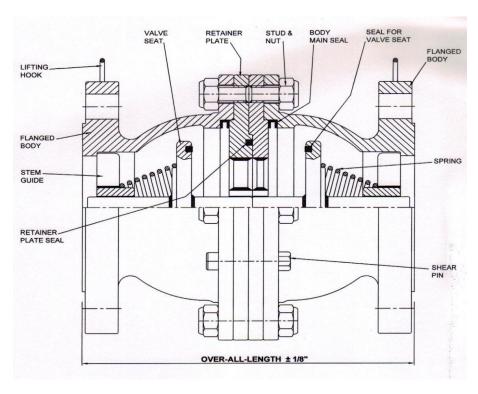
# GNY EQUIPMENT, INC.

20 DREXEL DRIVE, BAY SHORE, NEW YORK 11706, U.S.A Phone: (631) 273 4940 / Fax: (631) 273 5018 gnyequip@gnyequipment.com www.gnyequipment.com

#### **GNY Safety Break-Away Couplings**

#### Shear-Pins Design

#### For Onshore and SUBSEA Applications





Sizes: 2" to 12"NB (50 to 300 mm)

Built-In End Connections: Flange Ends (2" to 12") or Threaded Ends (2", 2-1/2" & 3") or Combination

Pressure Rating: ANSI Class 150 (PN 20) = 285 PSIG (19.5 Bar) and

ANSI Class 300 (PN 50) = 740 PSIG (51 Bar) at temp. -20°F to 250°F (-29°C to 121°C)

Material of Constructions: SS304/SS316 Body or CF8 (SS304) /CF8M (SS316) Casting with SS316 Internals.

**Design**: In Accordance with Section 5 of API 6H Spec.

Shear-Pin Breakaway: Designed to Breakaway at Factory-set up 275 PSIG (18.8 Bar) for Class 150.

Higher strength shear-pins available up to 430 PSIG (30 Bar) for Class 150 & 1110 PSIG (76 Bar) for Class 300.

Actual breaking of shear-pins are designed considering Pull-away Force and Internal Operating Pressure.

**Seals:** Viton®, Buna-N, Teflon® (PTFE), Silicon, EPDM, and Neoprene. Viton® & Teflon® regd. Trade-mark of DuPont.

Temperature Range: For seal material Buna-N -40°F to 250°F, Viton® -20°F to 400°F,

Teflon® (PTFE) -60°F to 550°F. For low or high temp. applications, contact factory.

**Hydro-Testing:** Each Half separately internally Hydro-tested as per API 6H Specs.

For ANSI Class 150 (tested at 430 PSIG = 30 Bar) and

For ANSI Class 300 (tested at 1110 PSIG = 76 Bar) at shop before shipping.

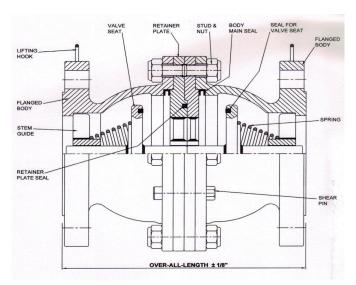
**Shear-Pin Breakaway Testing:** Fully Assembled Breakaway Test at 275 PSIG (18.8 Bar) for ANSI Class 150 and 700 PSIG (48 Bar) for ANSI Class 300 or as agreed.

**Functional Flow Testing:** Fully Assembled Functional Flow Tests are available and conducted during R&D. A Third-Party (BVIS/equal) witnessing Hydro-test, Breakaway test & Functional flow-test report, available. **Easy to REASSEMBLE in the field** using FREE spare shear-pins, supplied with Installation Instruction.

## **GNY Safety Break-Away Couplings**

## **Shear-Pins Design**

#### For Onshore and SUBSEA Applications

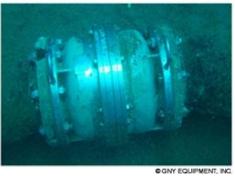




Data Table for ANSI Class 150 (Shear Pin Design)				
Size	Model Number	Over-All-Length (Inches)	Weights	
2"	SBC-2-150-SP	8.25"	12.25 Kgs. (27 lbs.)	
2-1/2"	SBC-2.5-150-SP	8.50"	18.60 Kgs. (41 lbs.)	
3"	SBC-3-150-SP	8.50"	32.65 Kgs. (72 lbs.)	
4"	SBC-4-150-SP	12.75"	64.5 Kgs. (142 lbs.)	
6"	SBC-6-150-SP	12.75"	78 Kgs. (173 lbs.)	
8"	SBC-8-150-SP	14.00"	130 Kgs. (288 lbs.)	
10"	SBC-10-150-SP	17.00"	188 Kgs. (416 lbs.)	
12"	SBC-12-150-SP	20.00"	230 Kgs. (505 lbs.)	

# GNY Safety Break-Away Couplings Shear-Pins Design





8" SBC Installed at SUBSEA, Dalaman Terminal, Turkey (FB1414: Year 2009)





8" SBC Ready for Shipment to various Terminals in Turkey







8" SBC Top View

**Machining at CNC Center** 

## GNY Safety Break-Away Couplings Shear-Pins Design





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2" to 4" SBC for Puerto Rico (U5226WP: Year 2002)



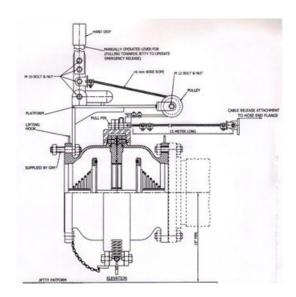


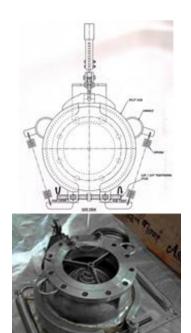
2" and 3" SBC with Threaded & Flange-End For Linde Process Plant, USA (FB 1395: Year 2009)

#### Safety Break-Away Couplings

#### Collar-Type Design

For Jetty Application





Sizes: 2" to 12"NB (50 to 300 mm)

End Connections: Flange Ends or Threaded Ends (2" & 3") or Combination (style 20)

Pressure Rating: At temp. -20°F to 250°F (-29°C to 121°C) ANSI Class 150 (PN 20) = 285 PSIG (19.5 Bar) and ANSI Class 300 (PN 50) = 740 PSIG (51 Bar)

Material of Constructions: SS304/ SS316 Body or CF8 (SS304) /CF8M (SS316) Casting with SS316 Internals.

Split-Hub, Manual Lever, Handle Pullpin, Chain: SS316/SS304 Seals: Viton®, Buna-N, Teflon® (PTFE), Silicon, EPDM, and Neoprene

**Design:** In Accordance with Section 5 of API 6H Spec.

**Temperature Range:** For seal material Buna-N -40°F to 250°F, Viton® -20°F to 400°F,

Teflon® (PTFE) -60°F to 550°F. For low or high temp. applications, contact factory

Manual Release: Manual Handle Release at the Jetty location

Dual Release: Manual Handle Release + Hose Pull away Cable Release (15 Meters long)

Triple Release: Manual Handle Release + Hose Pull away Cable Release +

Remotelly controlled Elec./ Air Release

**Hydro-Testing:** Each Half separately internally Hydro-tested as per API 6H Specs.

For ANSI Class 150 (tested at 430 PSIG = 30 Bar) and

For ANSI Class 300 (tested at 1110 PSIG = 76 Bar) at shop before shipping.

Seperation/Breakaway Testing: Fully Assembled Manual Release Seperation Test at shop

**Functional Flow Testing:** Fully Assembled Functional Flow Tests are available and conducted during R&D. A Third-Party (BVIS/equal) witnessing Hydro-test, Breakaway test & Functional flow-test report, available.

Re-Assemble in ther Field without and spare part, refer to Installation Instruction.

(Viton® & Teflon® regd. Trade-mark of DuPont.)

## Safety Break-Away Couplings

# Collar-Type Design For Jetty Application

#### Data Table for ANSI Class 150 (Collar-type Design) for Jetty

Size	Model Number	Over-All-Length (Inches)	Weights	
2"	SBC-2-150-JETTY	8.25"	13.60 Kgs. (30 lbs.)	
2-1/2"	SBC-2.5-150-JETTY	8.50"	20.40 Kgs. (45 lbs.)	
3"	SBC-3-150-JETTY	8.50"	36.30 Kgs. (80 lbs.)	
4"	SBC-4-150-JETTY	12.75"	71.70 Kgs. (160 lbs.)	
6"	SBC-6-150-JETTY	12.75"	87.50 Kgs. (193 lbs.)	
8"	SBC-8-150-JETTY	14.00"	145 Kgs. (320 lbs.)	
10"	SBC-10-150-JETTY	17.00"	209 Kgs. (462 lbs.)	
12"	SBC-12-150-JETTY	20.00"	252 Kgs. (558 lbs.)	







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SBC ready to install at Jetty Terminal, Turkey (FB1414: Year 2009)

## Safety Break-Away Couplings

# Collar-Type Design For Jetty Application





10" SBC Installed at Jetty Terminal, Turkey (FB1414: Year 2009)







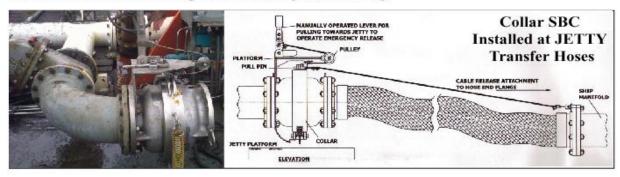
SBC ready to install at Jetty Terminal, Turkey (FB1414: Year 2009)

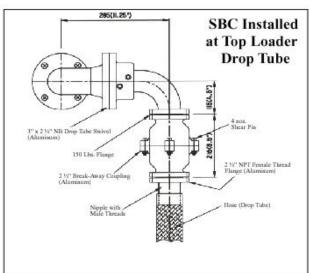
### **Major Applications for SBC Couplings**

Marine Liquid and Gas Transfer Hoses (AT JETTY)

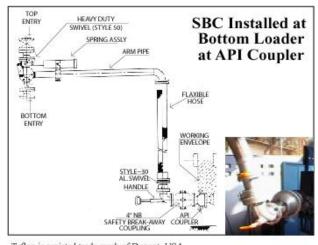
Liquid Loading/Unloading Arms and Hoses (Aviation, Oil, and Gas Industry) LP Gas Loaders, Unloaders, and Hoses,

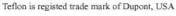
Civil and Military Fuels Dispensing Systems/ Pantograph Aviation Refeullers, Petroleum Product Handling Terminals, Depots, & Gantry.













SBC Installed at LP Gas Loaders 2", 2-1/2" or 3" x 300 lbs. flange-ends SBC at LPG Bottom Loader Road/Rail Tanker Loading.

#### Testing GNY Break-Aways....



4" Collar Dual Release SBC under testing. Manual release test conducted for successful break-aways. Sizes: 3", 4", 6", 8" and 10" x Class 150 has been tested for GNY Job Number: FB1414.





4" Shear-Pins SBC **Truck Pull Break Away testing.**A red color water as a visual indicator showing a successful break-away.





6" Shear-Pins SBC **Hydro Pressure Break Away testing.** A red color water as a visual indicator showing a successful break-away.



4" SBC
Angle Pull
Breakaway Testing

