Mann Tek

SBCouplings®

Safety Break-away Couplings

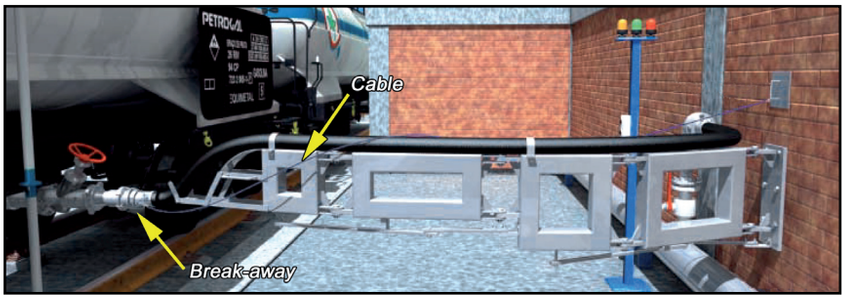
Cable release series

Art. nr: PR-030401-0121 Version 080318

General info

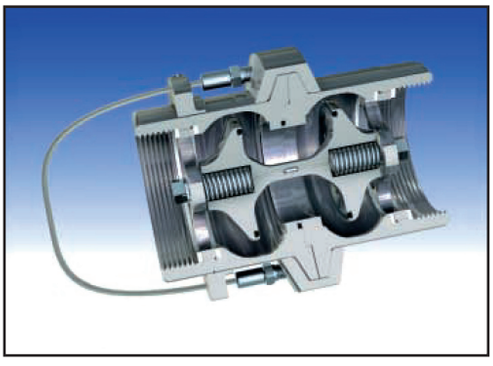
For safe transfer of all your hazardous and non-hazardous products.
The Break-away Cable release series, is designed specifically to minimize spillage and damage associated with drive away **and** pull away incidents .

The Coupling automatically senses an excessive load, closes its valves and then permits disconnection.



Function

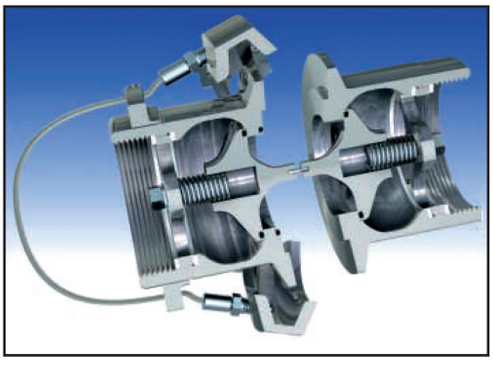
The safety break-away valve consists of two halves, each with a valve that has a flat type-sealing surface similar to a dry disconnect coupling.



The valve remains constantly open under normal use.

The two halves of the break-away coupling only close when there is excessive force, such as in a Road Tanker, or Rail Car drive away situation.

The release is executed by pulling out the locking bolts with the help of the cable. The locking bolts hold the two pressure clamps in position which press both casing halves of the SBCoupling together. A guiding pin set in between serves the alignment of the locking bolts.



When the SBCouplings separate, this allows the poppets to close. Product loss is minimized because of the two poppets close rapidly, minimizing exposure to personnel and the environment.

Safety Technologie for Rough Evironments: Cable Release Series

- Passive security against situations where a hose or loading arm could be subjected to inadvertent excessive loads.
- Minimal Tension forces on the cable are required to release the SBCouplings-system.
- Design features are a simple mechanism and no loose components which could be lost after release.
- Operates independently of shut off safety system and does not require an external power source.

Release forces and length on pull cable

DN / inch	Release force at 25 bar nominal pressure
DN 50 / 2"	0.8 kN
DN 80 / 3"	1.0 kN
DN 100 / 4"	1.5 kN
DN 150 / 6"	5.5 kN
DN 200 / 8"	8.5 kN

Length of the pull cable	
Hose / Pipe length	**Pull cable**
1000 mm	900 mm
1500 mm	1350 mm
2000 mm	1800 mm
2500 mm	2250 mm
3000 mm	2700 mm
>3000 mm	Supply line minus 0.5 m

The tie rod of the pull cable may be located no more than 0.5 m away from the range side connection of the supply line.

The maximum release angle of the pull cable should not exceed 30°.

Range of applications

Industrial

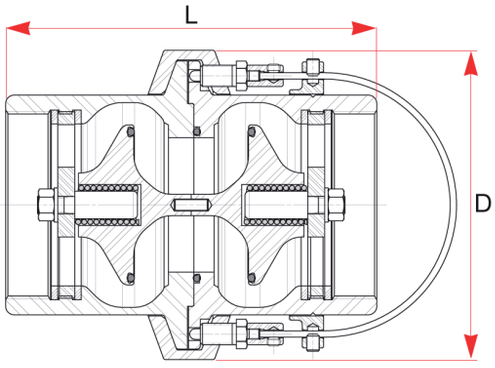
Plant engineering and construction
Power plant construction
Chemical industry
Food processing industry
Process technology
Tank cleaning
Filling systems for:
- airfields
- railcars
- tanker trucks
- ship
- tank containers

Filling and emptying liquid gas (LPG)

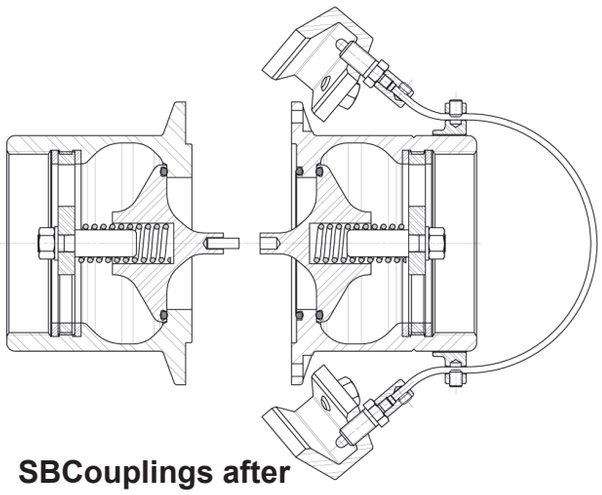
Media

Lyes and acids
Fuels and oils
Sea-water
Tap water, waste water
Toxic liquid
Gases, compressed air
Superheated steam
Powders, dust
Foodstuffs
Pharmaceutical products
LPG/LNG CNG
Materials hazardous to the environment

Construction, Threaded version



SBCouplings before emergency disconnect



SBCouplings after emergency disconnect

Data, Threaded version

SBCouplings, with Female BSP-threads (ISO 228).

Code nr:	DN:	BSP thread:	D (mm):	L (mm):	Weight (kg):
O207A4401A*	DN 40	1½"	98	122	2.4
O210A4401A	DN 50	2"	110	124	3.2
O312A4401A*	DN 65	2½"	134	148	5.2
O414A4401A	DN 80	3"	145	175	7.1
O516A4401A	DN 100	4"	185	206	14.4

SBCouplings, with Female NPT-threads (B1.20.3).

Code nr:	DN:	NPT thread:	D (mm):	L (mm):	Weight:
O208A4401*	DN 40	1½"	98	142	3.1
O211A4401	DN 50	2"	110	144	4.15
O313A4401*	DN 65	2½"	134	168	6.4
O415A4401	DN 80	3"	145	195	8.55
O517A4401	DN 100	4"	185	226	16.1

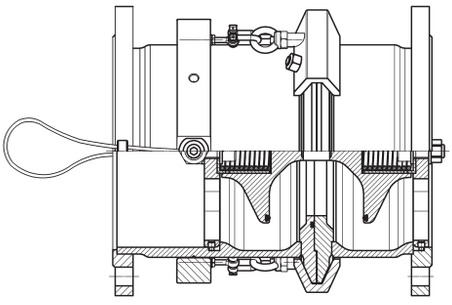
***1½" and 2½" only on request**

Materials:**
Stainless Steel AISI 316TI, other materials on request.
Orings: FPM (Viton®) other materials on request.
Flat seals in PTFE (Teflon®) other materials on request.

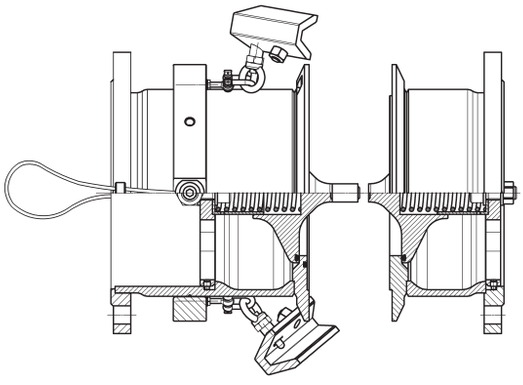
Working pressure: PN 25 (360 psi)

**Values for Stainless Steel

Construction, Flanged version



SBCouplings before emergency disconnect



SBCouplings after emergency disconnect

Data, Flanged version

SBCouplings, with Flanged connection.

Code nr:	DN:	Connection:	D (mm):	L (mm):	Weight (kg):
O645A4401	DN 150	DIN PN 10/16	285	311	46.2
O699A4401	DN 150	DIN PN 25	300	311	52.2
O6100A4401	DN 150	6" ASA 150 PSI	279	311	47.3
O6101A4401	DN 150	6" ASA 300 PSI	317	311	64.2
O8102A4401	DN 200	DIN PN 10	340	376	73.5
O8103A4401	DN 200	DIN PN 16	340	376	72.7
O8104A4401	DN 200	DIN PN 25	360	376	81.8
O8105A4401	DN 200	8" ASA 150 PSI	342	376	78.2
O8106A4401	DN 200	8" ASA 300 PSI	381	376	102.1

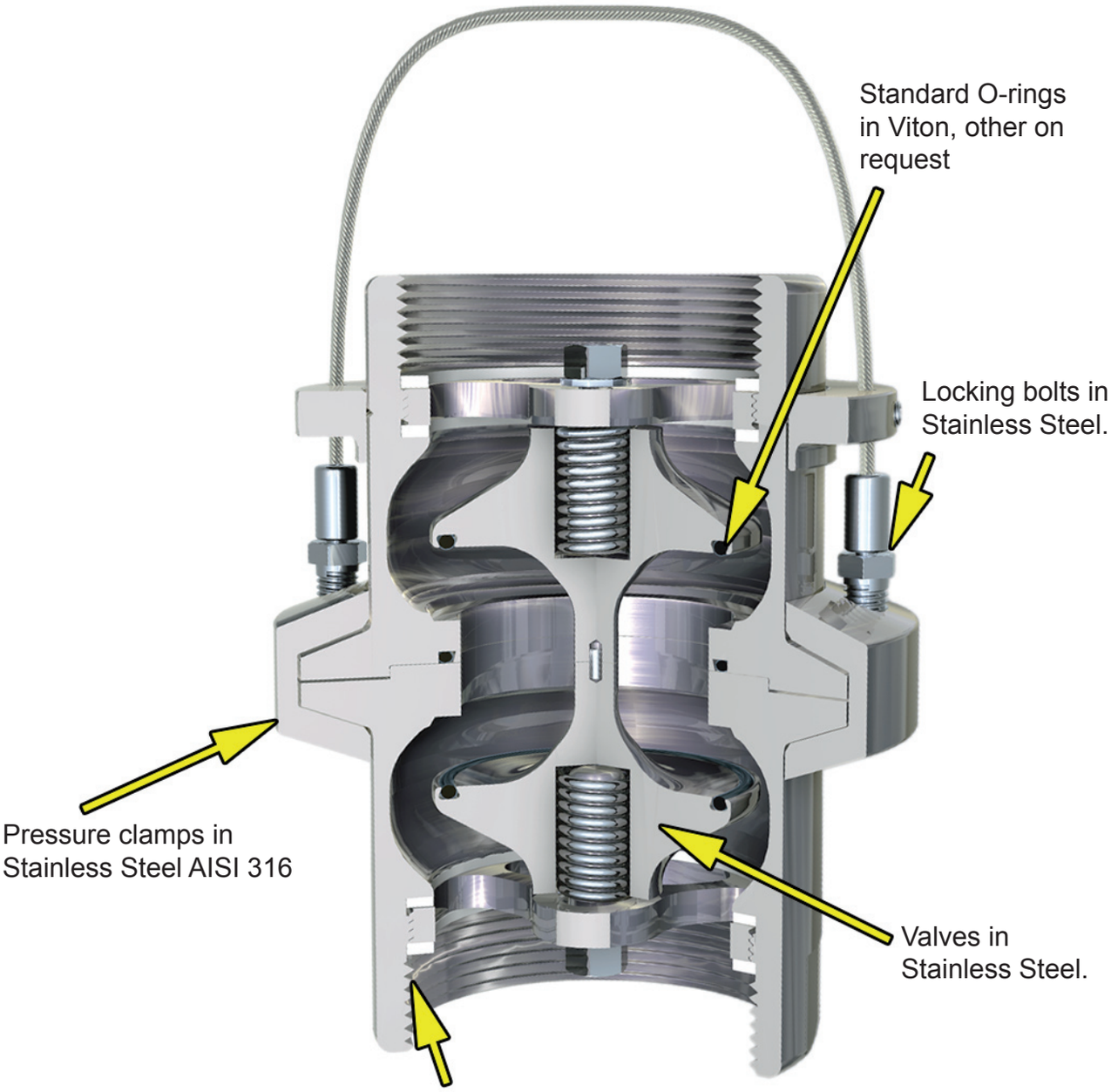
Materials*:
Stainless Steel AISI 316TI, other materials on request.
Orings: FPM (Viton®), other materials on request.
Flat seals PTFE (Teflon®), other materials on request.

Working pressure: PN 25 (360 psi)

*Values for Stainless Steel

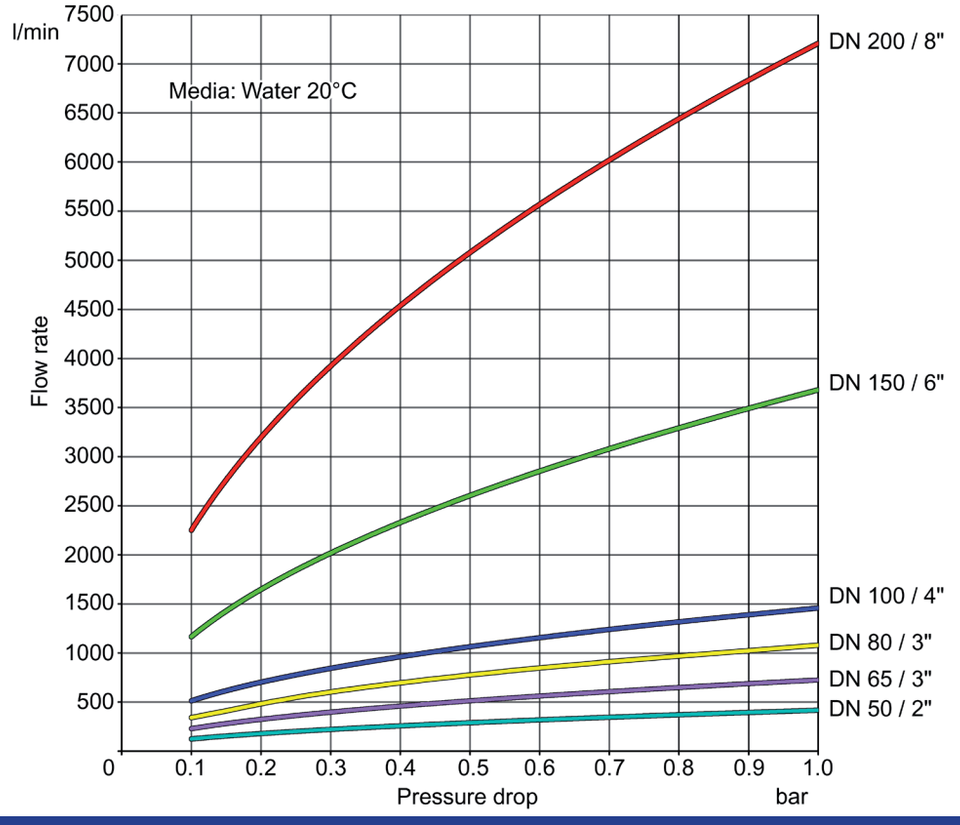
WARNING
Proper seal and wetted metal parts material selection is critical for safe operation. To assure maximum life for the service intended, use only those materials, sealing and lubricant compatible with the fluids being handled. Please note material being supplied and make certain that it is suited for the intended service.
This is especially important in the food processing industry.
Failure to do so could result in serious personal injury, property damage, or leakage.

Advantages



The Hose unit are supplied with parallel BSP threads and flat sealing surface.
This allows the use of the full thread length for screwed-on parts.
Also available with flange and tapered internal NPT threads.

Pressure Loss Curve



Versions of SBCouplings

Industrial version is utilized all industrial product transfer installations, the industrial SBCouplings is specifically designed to be able to activate with a tensile force being applied at an angle to the plane of the coupling housing, up to 90 degrees for bolt version, and 30 degrees for cable release version.
Exists with both cable and bolt versions.

Marine version of SBCouplings are designed specifically to be installed within a hose string,where the coupling would have a length of hose attached to both sides.
This coupling incorporates the same internal mechanism as our Industrial couplings, but has additional external features that provide increased resistance to torsional and bending moment forces which may be applied to the coupling, preventing premature activation in the unpredictable marine environment.
Typical applications include ship to offshore platform,
and ship to ship product transfer opertations.
Exists only in bolt version.

Non-Closure version is available in both the Industrial and Marine versions of our couplings, the Non-Closure design acts purely as an identified safe parting point within the transfer system, protecting equipment and personnel. With no internal mechanism these couplings are utilised when the medium is non-hazardous and spillage is acceptable.
Exists only in bolt version.

Mann Tek

Other Products

SBCouplings, bolt series

Safety Break-away, breaking bolts
Aluminium, Brass, Stainless Steel,
PN 16.
2" to 4", female threads,
with breaking pins.

DDCouplings®

Dry Disconnect Coupling.
¾" to 6", PN 16 - PN 25.
Aluminium, Brass-Gunmetal,
Stainless Steel and PEEK.
Other materials on request.
According to NATO standard
STANAG 3756.

DGCouplings®

Dry Gas Coupling.
1" to 4", PN25.
Stainless steel.
Other materials on request.
According to NATO standard
STANAG 3756.

DACouplings,

Dry Aviation Coupling.
2½", PN 10.
Main body in Aluminium.

Standards: ISO 45, MS 24484,
NATO STANAG 3105,
British Aerospace Spec. 2C14.

Sampling, Vent or Drain unit

Stainless Steel
SS-EN 10 088-1.4404+AT
(AISI 316L).

Ball Valve in 1.0619 and 1.4301

Full Flow - ballvalves

2" to 4", PN 10, Aluminium.
Ballvalve and 2-way Ballvalve.
Made for Petroleum Tank
Trucks. Variations of flange
connections.

Swivel joints

¾" to 4", PN 10 - PN 25.
Aluminium, Brass-Gunmetal,
Stainless Steel.
Other materials on request.
Connection: BSP, NPT.

Distributors

Your distributor:

Contact Mann-Tek for your local distributor

Phone: +46 501 39 32 00
Email: sales@mann-tek.se
Web site: www.mann-tek.se

LLOYD'S REGISTER QUALITY ASSURANCE · ISO9001 · UKAS QUALITY MANAGEMENT 001

www.mann-tek.se

Mann-Tek is a certified ISO9001-company.