Safety Breakaway Coupling
ASVL Series

Operating instruction
Dear customer,

Thank you very much for your purchase at RS. We are glad about your decision for one of our first class quality products and that we could convince you of our capability.

Ultimate perfection is our duty… i.e. our consequent and complete quality management throughout the whole production process guarantees that only faultless products leave our premises… quality does not allow any compromises!

For further detailed information about our products or an individual solution for your scope of work, do not hesitate to contact our sales team. We will assist you with all our experience and product know-how. A visit of our sales representatives can be arranged by appointment. It’s worth it!

Further information about us and our multifarious product range can be found on our web site www.rs-seliger.de.

We are looking forward to continuing our cooperation with you.

Yours sincerely

Dr. Jens Reppenhagen
Managing Director

www.rs-seliger.de
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1 Introduction

Introduction
These operating instructions describe how to safely assemble and operate the ASVL breakaway coupling.

- Read these operating instructions carefully prior to assembling and operating the product.
- These operating instructions must be retained for the entire service life of the breakaway coupling.
- Make sure that this instruction manual is accessible to the operator at all times.
- These operating instructions must be passed on to each subsequent owner or user of the breakaway coupling.
- Insert every supplement issued by the manufacturer.
- Note the other applicable documents.

1.1 Validity
These operating instructions apply exclusively to the assembly and operation of ASVL breakaway couplings manufactured by Roman Seliger Armaturenfabrik.

1.2 Target Group
These operating instructions for the ASVL breakaway coupling are aimed at the operators and planners of filling systems. The breakaway coupling is a safety component in a hose line/pipeline, which leads from a tanker facility to a mobile delivery and disposal unit.
1.3 Warnings, symbols and markings

1.3.1 Warnings in this documentation

These operating instructions use warnings to prevent injuries to persons or damage to equipment.

➤ Read and observe all warnings.

The warnings are identified by the following symbols and signal words:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Signal Word</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="https://via.placeholder.com/15" alt="⚠️" /></td>
<td>DANGER</td>
<td>Imminent danger! Failure to observe this warning may result in serious injury or death.</td>
</tr>
<tr>
<td><img src="https://via.placeholder.com/15" alt="⚠️" /></td>
<td>WARNING</td>
<td>Possible danger! Failure to observe this warning may result in serious injury or death.</td>
</tr>
<tr>
<td><img src="https://via.placeholder.com/15" alt="⚠️" /></td>
<td>CAUTION</td>
<td>Hazardous situation! Failure to observe this warning may result in minor injuries.</td>
</tr>
</tbody>
</table>
1.3.2 Symbols and markings

These operating instructions use symbols and markings to ensure easy and quick comprehension.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️</td>
<td>A prerequisite that must be fulfilled before you begin an action.</td>
</tr>
<tr>
<td>➔</td>
<td>An action involving one or more steps, the sequence of which is not relevant.</td>
</tr>
<tr>
<td>1. 2. 3. ...</td>
<td>An action involving multiple steps, the sequence of which is relevant and therefore specified.</td>
</tr>
<tr>
<td>(see Chapter xx, p. xx)</td>
<td>First level list</td>
</tr>
<tr>
<td></td>
<td>Cross reference to a specific location in these operating instructions</td>
</tr>
</tbody>
</table>

Table 1-1: Symbols and signs

⚠️ Note

Important information for understanding or optimising the assembly sequences.
1.4 **Fields of application**

The breakaway coupling is designed for use on hoses or pipelines. No specific flow direction is prescribed for the medium being conveyed.

1.4.1 **Industries**

- Plant engineering and construction
- Power plant construction
- Chemical industry
- Food processing industry
- Process technology
- Tank cleaning
- Filling systems for:
  - airfields
  - railroad tank wagons
  - tanker trucks
  - ships
  - tank containers
  - loading and unloading liquid gas

1.4.2 **Media**

- Lyes and acids
- Fuels and oils
- Gases
- Materials hazardous to the environment and water
2 Safety instructions

2.1 Intended use

ASVL series breakaway couplings are intended for use on hoses and pipelines as a piece of equipment with a safety function in accordance with the Pressure Equipment Directive.

They are provided to allow a hose line or pipeline to separate when a length defined by a load cable is exceeded and to seal both line ends to prevent any leakage of hazardous media.

The breakaway coupling may only be used after it has been correctly attached to the tank and hose line and after a leak test has been performed.

The connection of the cable for releasing the breakaway coupling must comply with the specified release force (Table 6-4; Chapter 6.6.2, p. 17) by offering a minimum safety factor of 5.

The breakaway coupling is provided exclusively to convey the approved media. Any other use shall be regarded as improper use. Examples of misuse include:

- Use outside the specified pressure and temperature ranges.
- Inadequate attachment of the load cable

The standard breakaway coupling version described here is not suitable for permanent installation on a transportable pressure unit in accordance with TPED Directive 2010/35/EU.

The breakaway coupling shall not be used as a safety fitting for pressure-limiting.
2.2 **Safety regulations**

The operator of the breakaway coupling is responsible for complying with all relevant legal regulations and directives.

- Breakaway couplings must only be commissioned, operated and maintained in accordance with the following regulations and standards.
  - Operating Instructions
  - Other applicable documents (country-specific ordinances on pressure equipment, operational safety, hazardous goods and environmental protection)
  - Regulations regarding hazardous substances and highly inflammmable or combustible fluids
  - Regulations for systems in areas where there is a risk of explosion
    This applies in particular to the prevention of sparking caused by static electricity, to the earthing of system components and the volume resistivity of the conductive hose line.
  - System-specific regulations and requirements
  - Equipment and product safety legislation for pressure equipment
  - Valid international, national and regional regulations
  - Accident prevention regulations
- Ensure that the breakaway coupling, tank and hose line is accepted by suitably qualified personnel (experts, trained personnel, professional training, professional experience) and that acceptance is documented by these persons.
- Observe all approval procedures, required test regulations and test periods.
- Pre-commissioning and post-maintenance inspections must only be carried out by suitably qualified personnel (experts, trained personnel, professional training, professional experience). Take account of the certified specialist requirement in accordance with §19 I WHG.
- Implement all the necessary measures for inspection, maintenance and repair in accordance with the national regulations in the country of use.
- The maintenance and repair intervals are to be specified by the operator.
- Check the breakaway coupling at least once monthly to ensure that it is in proper condition and free of leaks. Document the results of the inspections.
- If the breakaway coupling is part of a system that requires testing, have the breakaway coupling checked by the expert during the first and all subsequent inspections.
2 Safety instructions

- A risk analysis for the system and the media being conveyed is to be compiled by the operator.
  - Note the specifications of the professional association for the chemical industry.

The operator must ensure that the breakaway coupling is suitable for transporting the medium. This applies in particular to aggressive or abrasive media that can damage the breakaway coupling or the components of a hose line by chemical reaction, corrosion or erosion.

2.3 Personnel qualification

The operator is responsible for ensuring that assembly, maintenance, commissioning is only carried out by educated and trained specialists.

At this point, we would like to draw your attention to the certified specialist requirement in accordance with §19 I WHG.

The operator must provide competent and trained personnel, who can demonstrate in their dealings with hose lines, breakaway couplings, a familiarity with the respective required medium and its potential hazards, the relevant safety regulations and the regulations of the relevant professional associations.

- Make sure that the personnel have understood and can implement these operating instructions.
- Make sure that the personnel know and comply with the relevant accident prevention and safety regulations.
- Make sure that the personnel are using suitable protective clothing/equipment.

2.4 Safe handling

- Before operating the breakaway coupling, check it to ensure that it functions properly and is free of leaks.
- Before filling or emptying tanks, attach the control cable to a suitable fixed anchorage close to the tap connection.
- Check that the control cable and cable tie mount are securely attached and of adequate strength.
  - The tensile strength of the anchorage must be at least 5 times greater than the release force of the breakaway coupling.
- When using the breakaway coupling in an elevated position, make certain that people cannot be injured by falling parts of the coupling.
3 Storage and transport

- Only transport or store the breakaway coupling in the cleaned condition.
- Cover openings with suitable seals to prevent any impairment of the surfaces/mating surfaces and to protect these against contamination.
- Seals must only be removed by suitably qualified personnel.
- Make sure that no damage can occur at the storage location as a result of corrosion or extreme temperatures.

4 Scope of delivery

The ASVL breakaway coupling is supplied ready to use, with sealing caps for both openings and with a transport lock for the load cable.

5 Tools

For assembling the breakaway coupling:

Wrench with suitable width across flats (for information on nominal widths, see Table 6-2, p. 15). Wrench is not included in scope of delivery.
6 Design and mode of operation

Figure 6-1: Breakaway coupling ASVL with threaded connection

1. Tank thread ASVL
2. Spider
3. Rocker arm
4. Support ring
5. Impact ring
6. Hose thread ASVL
7. Non-return valve
8. Trigger cable
9. Transport lock
Figure 6-2: Breakaway coupling ASVL with flanged connection

1 Tank flange ASVL
2 Spider
3 Rocker arm
4 Support ring
5 Impact ring
6 Tank flange ASVL
7 Non-return valve (not shown)
8 Trigger cable
9 Transport lock
6 Design and mode of operation

6.1 Mode of operation

The ASVL breakaway coupling consists of two coupling halves, each of which is equipped with a non-return valve. The coupling halves are held together in the operating state by three rocker arms and a support ring. The two non-return valves brace each other in the operating state and keep the flow cross-section open.

Separation of the breakaway coupling is initiated, for example, if the tank wagon/tanker truck rolls away or if the product line was not disconnected before the tanker truck drives off.

Before the product line is strained by an impermissible action of force, the support ring is pulled from under the arms by means of a control cable attached to the system. The arms then release the casing halves.

In the event of a separation, the non-return valves abruptly close both line ends. One coupling half remains attached to the tank wagon/tanker truck, the second coupling half remains attached to the product line. Uncontrolled leakage of fluids or gases from the two product-conveying line ends is prevented.

6.2 Marking

Each coupling half is provided with a marking. The marking contains the following information:

<table>
<thead>
<tr>
<th>Marking</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>TÜ.AGG.214-94</td>
<td>Component marking</td>
</tr>
<tr>
<td>CE 0575 II 2G T(x)</td>
<td>CE marking with the ID number of the certification body, Ex marking</td>
</tr>
<tr>
<td>Manufacturer's code: RS</td>
<td>Manufacturer identification</td>
</tr>
<tr>
<td>ASVL.080300.120-01</td>
<td>Item number to identify the product</td>
</tr>
<tr>
<td>Nr.1038/11</td>
<td>Serial number/year of manufacture</td>
</tr>
<tr>
<td>Plant no. 74865/1.4571</td>
<td>Plant number/material identifier (casing)</td>
</tr>
<tr>
<td>Ü</td>
<td>Conformity identifier for construction products Z-38.4-254</td>
</tr>
<tr>
<td>DN PN TS</td>
<td>Nominal width, pressure stage, temperature range</td>
</tr>
</tbody>
</table>

*Table 6-1: Marking on the casing*
6.3 Nominal widths and pressure stages

<table>
<thead>
<tr>
<th>Type</th>
<th>Nominal width</th>
<th>Connection variants</th>
<th>Pressure stage</th>
<th>Width across flats</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASVL</td>
<td>DN 50</td>
<td>G2&quot; IG/AG</td>
<td>PN 25</td>
<td>70</td>
</tr>
<tr>
<td>ASVL</td>
<td>DN 80</td>
<td>G3&quot; IG/AG</td>
<td>PN 25</td>
<td>100</td>
</tr>
<tr>
<td>ASVL</td>
<td>DN 100</td>
<td>G4&quot; IG/AG</td>
<td>PN 25</td>
<td>125</td>
</tr>
<tr>
<td>ASVL</td>
<td>DN 150</td>
<td>Flange ASA 150</td>
<td>PN 10</td>
<td>–</td>
</tr>
<tr>
<td>ASVL</td>
<td>DN 200</td>
<td>ANSI 150 PSI</td>
<td>PN 10</td>
<td>–</td>
</tr>
</tbody>
</table>

Table 6-2: Nominal widths and pressure stages

6.4 Temperature range

The breakaway coupling is approved for temperatures between –20 °C and +150 °C. The permissible temperature range is dependent on the sealing material used and the medium conveyed and must be tested for the specific application.

6.5 Release angle

The maximum angle of force application at which emergency separation is guaranteed is 90° to the longitudinal axis of the coupling, rotationally symmetric to all sides.
6 Design and mode of operation

6.6 Technical data

6.6.1 Materials

<table>
<thead>
<tr>
<th>Component</th>
<th>Material no./ short description</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casing, pressure-bearing parts</td>
<td>1.4571</td>
<td>X6CrNiMoTi17122 (AISI 316 Ti)</td>
</tr>
<tr>
<td></td>
<td>2.4602</td>
<td>NiCr21Mo14W (Hastelloy C22)</td>
</tr>
<tr>
<td></td>
<td>2.4610</td>
<td>NiMo16Cr16Ti Hastelloy C4)</td>
</tr>
<tr>
<td>Spring/standardised components</td>
<td>1.44012, 2.4602, 2.4600</td>
<td>X12CrNi177NiCr21Mo14W</td>
</tr>
<tr>
<td>O-ring seals</td>
<td>FKM</td>
<td>Viton™</td>
</tr>
<tr>
<td></td>
<td>Ethylene-propylene-diene monomer EPDM</td>
<td>Sodium-butadiene AP</td>
</tr>
<tr>
<td></td>
<td>NBR</td>
<td>Perbunan</td>
</tr>
<tr>
<td></td>
<td>Perfluorelastomer FFKM</td>
<td>Kalrez™ Chemraz™</td>
</tr>
<tr>
<td>Thread seal</td>
<td>PTFE</td>
<td>Teflon™</td>
</tr>
</tbody>
</table>

*Table 6-3: Materials*

Linie aus ABVL kopieren

1 Kalrez™, Viton™, Teflon™ = registered trademarks of DuPont

**Note**

Other materials for casing and seals available on request.
6.6.2 Release force and residual amounts

<table>
<thead>
<tr>
<th>Nominal width</th>
<th>Release force at 25 bar nominal pressure kN</th>
<th>Residual amount cm³</th>
</tr>
</thead>
<tbody>
<tr>
<td>DN 50</td>
<td>0.65</td>
<td>140</td>
</tr>
<tr>
<td>DN 80</td>
<td>1.0</td>
<td>450</td>
</tr>
<tr>
<td>DN 100</td>
<td>1.2</td>
<td>830</td>
</tr>
<tr>
<td>DN 150</td>
<td>2.8</td>
<td>2000</td>
</tr>
<tr>
<td>DN 200</td>
<td>4.3</td>
<td>5100</td>
</tr>
</tbody>
</table>

*Table 6-4: Release force and residual amounts*

The specified values apply for a tension direction of 0°. Depending on the cable connection, the tension direction may vary by up to 90°. In this case, the withdrawal force increases.
7 Installation/assembly

Before commissioning/assembly, read and follow the instructions in Chapter 2, p. Fehler! Textmarke nicht definiert.

During assembly, avoid the introduction of additional forces, bending moments or vibrations at the connection coupling.

Tools required for assembly:
Use a suitable tool for the wrench flats provided on the breakaway coupling. Nominal widths, see Table 6-2, p. 15.

The breakaway coupling is installed directly in a product line (between the hose line and pipeline). The breakaway coupling is ready for use once the transport lock has been removed.

![Figure 7-1: Assembling the breakaway coupling](image)

1 Hose line/pipeline 1  4 Connection 1
2 Breakaway coupling ASVL  5 Connection 2
3 Hose line/pipeline 2  6 Screw-on caps (not shown)
7.1 Fitting the breakaway coupling

⚠️ Caution

Risk of injury from sharp edges and burrs!
→ Wear protective gloves.

⚠️ Caution

Risk of injury due to escaping fluids and danger of environmental damage!
→ Wear protective clothing.
→ Completely drain the product-conveying lines.
→ Use a suitable collecting vessel

⚠️ Caution

Risk of injury with wider nominal widths of the breakaway coupling!
→ Use suitable lifting equipment.
→ Carry out the assembly with a second person.
→ Wear protective clothing.

1. Remove all packaging and screw-on caps.
2. Check the breakaway coupling for signs of damage.
Figure 7-2: Attaching the hose line

3. Tightly screw the coupling end without the cable guide 2 to the tank wagon/tanker truck 1.

4. Tightly screw the hose line end 4 to the coupling end with the cable guide 3.
   – Take care that the hose is not twisted in the process.
   – Do not use sealing aids (such as PTFE tape).

⚠️ Note

The coupling end with the cable guide must always point in the direction where the loose end of the cable is to be attached.
We recommend connecting the control cable as described above. Connection in the reverse direction is possible following consultation with the manufacturer.

5. Check that the connections are free of leaks.
6. *Attach the release cable 1 on the breakaway coupling to a suitable control cable 2.*

**Warning**

Risk of injury due to escaping fluids and danger of environmental damage!

- Make sure that the control cable is shorter than the product line.
- Make sure that the minimum tensile strength of the entire cable connection has a safety margin of at least 5 times the maximum release force (see Table 6-4, p. 17).

Do not exceed the maximum release angle of 90°.

7. Attach the control cable to a tie bar.

8. Position the tie bar on the system side so that the control cable is tensioned earlier than the hose line for every conceivable type of release.
Figure 7-4: Removing the transport lock

1. Remove the transport lock 1 or 2.
   - DN 50 – DN 80 loosen the 2 hexagon bolts and remove the red ring 1 on the extension ring.
   - DN 100 – DN 200 loosen the 3 hexagonal bolts and remove the 3 red spacers 2.
8 Commissioning

✔ Breakaway coupling properly fitted in a system
✔ Functional tests as well as leak tests inspected by approved bodies
✔ Proper state of the control cable and its anchorage checked by competent personnel

➔ Always check the following points before commissioning:
  – Condition of the control cable
  – Connection of the control cable
  – Correct position of the release mechanism
  – Seal of the breakaway coupling
  – Seal of the connection from the system (product line, tank/tanker truck) to the breakaway coupling
  – Conductivity of the entire product line
  – Electrical volume resistivity (R ≤ 10 MΩ) complied with?

➔ If the breakaway coupling is damaged or if you are aware of pre-existing damage which could lead to a malfunction, do not use the breakaway coupling.

➔ Start up the system, start conveying and/or pump operation. Observe the operating instructions for the system.
9 Operation

**Warning**

Risk of injury due to falling coupling casing!

If using the breakaway coupling in an elevated position, persons may be injured if part of the casing falls.

→ Make sure that no persons are standing directly beneath the breakaway coupling.

**Warning**

When released, the breakaway coupling separates abruptly!

The conveyed medium may spray into the eyes.

→ Wear protective goggles.

**Caution**

Emergency separation cannot be guaranteed if the release angle is exceeded!

→ Do not exceed the maximum release angle of 90°.

- Both product line ends properly connected and ready for use
- Breakaway coupling closed
- Control cable secured
  
  The breakaway coupling separates if the maximum travel (tension of the control cable) is exceeded.
### Procedure after release of the breakaway coupling

<table>
<thead>
<tr>
<th><strong>Warning</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risk of injury due to escaping fluids and danger of environmental damage!</strong></td>
</tr>
<tr>
<td>Fluids may escape when the breakaway coupling is released or if closures are opened.</td>
</tr>
<tr>
<td>→ Wear suitable personal protective equipment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Note</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Once released, the breakaway coupling cannot be reused.</strong></td>
</tr>
<tr>
<td>The coupling must be repaired by the manufacturer or an authorised service agent.</td>
</tr>
<tr>
<td>→ Clean the breakaway coupling of product residues.</td>
</tr>
<tr>
<td>→ Send the breakaway coupling for repair to Roman Seliger Armaturenfabrik GmbH or to an authorised service agent.</td>
</tr>
</tbody>
</table>
11 Cleaning

➔ Each time before cleaning, check the breakaway coupling and connections for leaks.

➔ Only use suitable cleaning agents for cleaning.

➔ When adhesive or setting products are used, produce residues must be cleaned from the coupling after each use.

➔ Clean the breakaway coupling (regardless of the conveyed medium) prior to disassembly.

➔ Remove any cleaning agent residues.
### Dismantling

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk of injury due to escaping fluids and danger of environmental damage!</td>
</tr>
<tr>
<td>Fluids may escape when the breakaway coupling is released or if closures are opened.</td>
</tr>
<tr>
<td>➔ Wear suitable personal protective equipment.</td>
</tr>
<tr>
<td>➔ Make sure that the coupling halves are unpressurised and that the hose line is completely drained.</td>
</tr>
<tr>
<td>➔ Use suitable tools.</td>
</tr>
</tbody>
</table>

 ➔ Clean the coupling before dismantling it, see Chapter 11, p. 26.

 ➔ Use a suitable wrench to unscrew both coupling halves.
13 Maintenance/repair

The operator must specify the maintenance and repair measures and intervals in accordance with the operating conditions. These include:

- Checking the breakaway coupling for signs of damage or defects.
- Checking that the breakaway coupling is in a functional state and free of leaks.
- Water pressure tests with 1.5 times overpressure

Do not use a damaged breakaway coupling.

Carry out regular maintenance, at the latest after one year.

Do not reuse the breakaway coupling once it has released. Repair by the manufacturer is required in every case.

Have maintenance and repairs to the breakaway coupling carried out by Roman Seliger Armaturenfabrik GmbH or by companies/persons authorised by Roman Seliger Armaturenfabrik GmbH.

Perform visual inspections at regular intervals.

- Checking the breakaway coupling for signs of damage or defects.
- Checking that the breakaway coupling is in a functional state and free of leaks.

Eliminate identified faults immediately or permanently decommission the breakaway coupling.

Adhere to and document the specified maintenance intervals.

Note

Damage to the breakaway coupling caused by repairs carried out by unauthorised persons.

Do not attempt to carry out repairs yourself.

A defective breakaway coupling may only be repaired by Roman Seliger Armaturenfabrik GmbH or companies/persons authorised by Roman Seliger Armaturenfabrik GmbH.
14 Disposal

➔ Observe the relevant national and regional regulations when disposing of or recycling the breakaway coupling or its components.

➔ Should you have any questions on how to dispose of the breakaway coupling, please contact the manufacturer or an authorised specialist.

15 Warranty

Roman Seliger Armaturenfabrik GmbH accepts no responsibility for damages due to faulty installation, faulty handling, as well as negligent or incorrect maintenance.

The operator is solely responsible for the installation, operation, and maintenance of the coupling.
EU Konformitätserklärung

EU Declaration of Conformity

<table>
<thead>
<tr>
<th>Bezeichnung</th>
<th>Typ</th>
<th>Nennweite</th>
<th>Druckstufe</th>
<th>Temperaturbereich</th>
<th>Gehäusewerkstoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nottrennkupplung</td>
<td>ASVL</td>
<td>DN50 – DN200</td>
<td>PN16 – PN25</td>
<td>-40°C / +150°C</td>
<td>Edelstahl</td>
</tr>
<tr>
<td>Seilauslösung</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Stainless steel</td>
</tr>
</tbody>
</table>

Gemäß folgender:

EU Richtlinien:

EU directives:

- 2014/68/EU
  Richtlinie für Druckgeräte
  Pressure Equipment Directive

- 2014/34/EU
  Richtlinie - für Geräte und Schutzsysteme zur bestimmungs-
  gemäßen Verwendung in explosionsgefährdeten Bereichen (ATEX)
  Directive - concerning equipment and protective systems intended for use in potentially explosive atmospheres (ATEX)

- DIN EN 1127:2011
  Explosionsschutz, Grundlagen und Methodik
  Non-electrical equipment intended for use in potentially explosion atmospheres – Basic method and requirements

- DIN EN 13463:1-2009
  Nicht-elektrische Geräte für den Einsatz in explosions-
  gefährdeten Bereichen, Grundlagen und Anforderungen
  Non-electrical equipment intended for use in potentially explosion atmospheres – Basic method and requirements.

- DIN EN 13463:5-2011
  Nicht-elektrische Geräte für den Einsatz in explosions-
  gefährdeten Bereichen, Schutz durch sichere Bauweise
  Non-electrical equipment intended for use in potentially explosion atmospheres – Protection by constructional safety

Angewandter harmonisierter Standard:

- DIN EN 12266:2012
  Prüfung von Armaturen
  Testing of valves

- DIN EN 12516-1,2:2015
  Industriearmaturen Gehäusefestigkeit
  Tabellenverfahren (-1), Berechnungsverfahren (-2)
  für drucktragende Gehäuse von Armaturen aus Stahl
  Industrial valves – Tabulation (-1), Calculation (-2) method for steel valve shells

Weitere angewandte technische Regeln:

- AD2000 – 07.2015

TRGS 727 – 2016

(Dules of the German Federal Ministry of Labour and Social Affairs)

Vermeiden von Zündgefahren infolge elektrostatischer Aufladung
Prevention of ignition hazards due to electrostatic charges.

Die Konformitätsbewertung für das oben genannte Druckgerät wurde durchgeführt gemäß:

The conformity assessment of the above-mentioned pressure equipment is executed in accordance of:

EU Richtlinie /n: Bewertungsverfahren

EU directive /s: Valuation procedure

- 2014/68/EU
  Modul B
  Kategorie IV
  TÜV Nord Systems
  GmbH & Co. KG
  Große Bahnhofstr. 31
  D-22525 Hamburg
  0045
  07 202 1409 2 0129/15/D 0109 -

- 2014/68/EU
  Modul D
  Kategorie IV
  DNV GL SA
  Veritasveien 1
  N-1322 Hovik
  0575
  PEDD00000001
  CE 0575

- 2014/34/EU
  Gruppe II
  Kategorie 2
  TX
  TÜV Nord Cert
  GmbH & Co. KG
  Am TÜV 1
  D-30519 Hannover
  0044
  CEII 2G c TX

Der Hersteller bestätigt hiermit die Konformität, des Druckgerätes, mit den oben genannten Richtlinien.

The manufacturer hereby confirms the conformity of the pressure equipment with the above-mentioned directives.

Norderstedt, 28.10.2016

[Signature]

I.A. Thomas Schadow\n
Manager (Signature)

[Date]

[Company]
RS - Reliability in Quality and Service

Dear Customer,

Our highly developed dry disconnect and breakaway couplings render reliable services as important safety elements in many loading processes throughout the world in daily use. High stress and the often rough ambient conditions, the couplings are exposed to, require regular inspection. This is the only way to ensure proper functioning.

Striving to hold these service times as short as possible and thus to reduce your customers’ down-times to a minimum, we have overworked and reorganised our service process. In this way we have succeeded in offering you clearly reduced service throughput times. Thus future service and, if necessary, repair of a dry disconnect and breakaway coupling with nominal widths DN 25 - DN 100, equipped with FKM or EPDM seals, will be completed within one week. Service or repair of couplings with larger nominal widths or equipped with special sealing materials may require slightly more time, though.

To be able to return your serviced couplings immediately, we have established a cost fee and estimated amounts system. In the future, we will be able to inform you in general about the costs of the standard service already before the inspection of the dry connect and breakaway couplings to be repaired. These costs include the following works:

- Disassembling the coupling an cleaning the component parts
- Inspecting all component parts and necessity of replacement check
- Replacing all O-rings and seals
- Remounting as well as leak and functional testing

Components that need to be replaced in addition will be charged separately. In the future, we will ask you to approve an estimated amount in addition to the standard service fee. In order not to jeopardise the service process, we will then carry out works whose overall costs are below this approved estimated amount without consulting you again.

In order to ensure a smooth and efficient process, the future service process will be as follows.

1. **Notification of required service:** Prior to dispatching the coupling to be serviced/repairoed to us, please contact our sales department and state the item number - and ideally the serial number (engraved in the coupling) as well. You will receive from our sales department an offer on the standard service as well as information on the amount of the additional cost fee within 24 hours.
2. **Coupling dispatch:** If you accept our offer, you will send us the couplings to be serviced *along with the according declaration of contamination*. Please note that we must not work on couplings without a declaration of contamination due to employment protection reasons! Items without corresponding declaration will be brought to a quarantine store and will have to be disposed of with costs as hazardous waste, unless the missing declaration will be submitted within a period of 72 hours.

3. **Service and return:** The coupling is serviced and tested according to the submitted offer. If the approved estimated amount is exceeded, the responsible sales staff will contact you to determine further steps. After completion of the works, the coupling is immediately returned to you.

Please find enclosed a leaflet containing all important information on how to initiate service or repair.

We already now thank you for your assistance. We shall always strive to continually optimise both our products and processes in the future in order to be able to offer you both the best couplings and an excellent service.

Yours sincerely

RS Roman Seliger  
Armaturenfabrik GmbH  

[Signature]

Dr.-Ing. Jens Reppenhagen  
Managing Director
Have you got a coupling that needs service or repair? No problem! Initiate professional and quick service/repair in two simple steps.

**Step 1: notification of required service**

- **How to do?**
  - By telephone: +4940 52306499
  - Email: service@rs-seliger.de
  - Fax: +4940 52306425
- **What information is required?**
  - Item number of the coupling(s) to be serviced/repaired
  - Serial number of the coupling(s) to be serviced/repaired
    *(Both found in the coupling gravure)*

  ➔ **You will receive an offer for the standard service**¹ along with information on potential service maximum costs without consultation.

**Step 2: dispatch of the coupling when you accept the offer**

- **Where?**
  Roman Seliger Armaturenfabrik
  An’n Slagboom 20
  22848 Norderstedt
- **What documents have to be added?**
  - Delivery note
  - Completed declaration of contamination (see the appendix)
    **Caution!** Due to employment protection reasons, a coupling without valid declaration of contamination must not be worked on and is disposed of with costs as hazardous waste if the declaration will not be submitted within a period of 72 hours.

  ➔ **Your repaired/serviced coupling will be dispatched to you by RS within one week’s time**².

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¹ Dismounting, cleaning, visual inspection, replacement of gaskets and O-rings, mounting, testing
² Subject to standard component replacement; there may be a delay in individual cases.
Check list for the repair and maintenance of Dry Disconnect– and Safety Breakaway Couplings according to BG T002 9/95

This list is to be filled out and countersigned by the coupling operator and vendor. For our employees industrial safety reasons, the repair can only be made according to this check list.

The coupling to be repaired was used with the following product:

Chemicals-/ product name: ________________________________
EG-/ CAS-/ UN-Nr. ___________________

Aggregate state:
- [ ] firm  [ ] liquid  [ ] gaseous

Water hazard class:

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<th>2</th>
<th>3</th>
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</thead>
</table>

The product is without foreign contamination: [ ] yes  [ ] no

The product reacts:

- [ ] With water
- [ ] With air
  - If yes:
    - [ ] The developing gases / vapours are:
      - [ ] Ignitable/ self inflammable
      - [ ] Injurious to health
      - [ ] Toxic or very toxic
      - [ ] Corrosive or irritating
      - [ ] Carcinogenic
      - [ ] Biological hazard possible
      - [ ] other
Were the couplings cleaned, and are therefore harmless to deal with?

Which rinsing media were used during production?

In which period was the coupling used?

From _______ to ________

How often was the coupling used?
Per day _____ per week ____ per month ______

Were maintenance and repair work carried out by your staff?

The following preventive measures are recommended:

Other preventive measures

none
Vacuum cleaning of workplace
Closed extraction unit
Sufficient room ventilation

Eye protector
Full mask
Rubber gloves

We thank you for the support of our industrial safety.

Date: _____________ Operator: ________________ Distributor: _____________________