

# Hydraulic **dual-line emergency brake valve** “NBV16..SC..” Split coupling

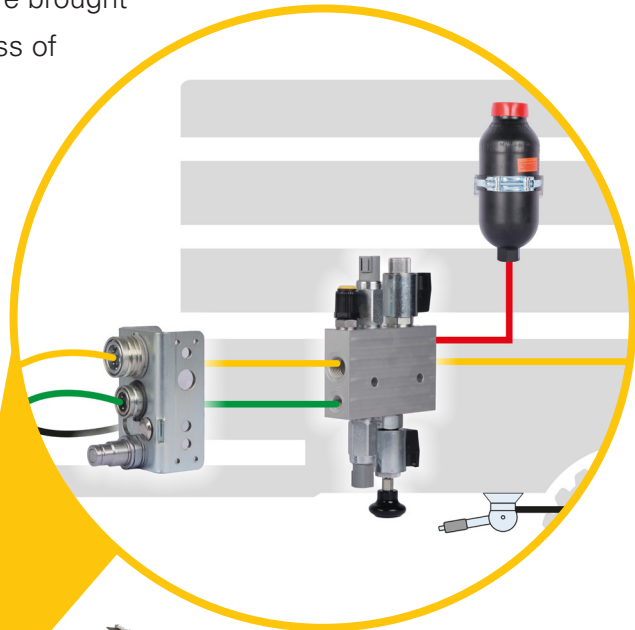
[Acc. EU VO 167-2013, EU VO 2015-68, EU VO 2016-1788, ASTRA Weisung v. 28.05.2020]

**NEW**

The new emergency brake valve “NBV16..SC..” with its Dockings-Station is the central component on a trailer. Here the control line CL, the supplementary line SL and the emergency brake function are brought together via the pressure accumulator. Regardless of whether the towing vehicle is equipped with a previous 1-line or a new 2-line brake system.

- More **flexible** for installation
- More **ergonomic** for the user
- **Easier** for operators and manufacturers

**PATENTED**



## **Automatic braking respectively emergency braking takes place if:**

- the electrical transmission device (ABS cable between tractor and trailer) is interrupted.
- the supplementary line is torn off. In this case the couplings on the Dockings-Station serve as predetermined breaking points and prevents unintentional oil leakage.
- the pressure in the supplementary line from the tractor drops due to engine stall.
- the pressure in the supplementary line of the tractor brake valve is automatically reduced by emergency and control functions (e.g. due to missing pressure build-up on the control line, hose breakage on the towing vehicle, interruption of the oil supply etc.).



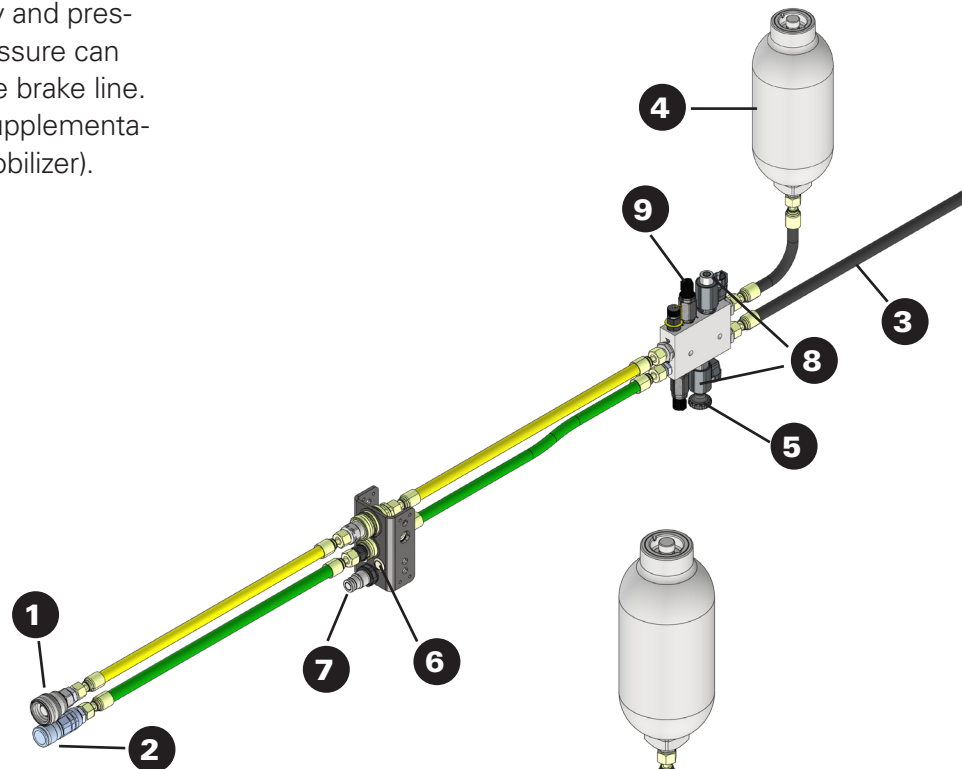
## Further key features

- Electrical triggering of the secondary braking function if the towing vehicle is equipped accordingly. For vehicle combinations of old-legal single line towing vehicles and new-legal dual line trailers (permitted in Switzerland according to ASTRA directive of May 28, 2020).
- When the tractor is braking, the pressure is transmitted to the brake cylinders via the CL control line and the accumulator is recharged (if necessary).
- If the parking brake, respectively the secondary brake is activated on the tractor, braking is automatically applied on the trailer. To cancel this braking, the trailer requires pressure (15-35 bar) on the supplementary line and electric current for the immobilizer valve. Even without electricity and pressure on the SL supplementary line, pressure can always reach the brake cylinders via the brake line. Without current and pressure on the supplementary line, the brakes do not release (immobilizer).

- A pressure switch monitors the accumulator pressure and signals too low pressure (less than the minimum necessary for emergency braking) via the standardised plug (ABS) on the driver's brake control light.
- Torn hose lines, which resulted in emergency braking, can be recoupled at any time (even under pressure) without tools. A single pressure build-up on the control line makes the trailer ready for operation again.
- With the manual drain valve the brake pressure can be released and the accumulator emptied (emergency situation, after a breakdown, etc.). All you need to do is connect the control line to the tractor.

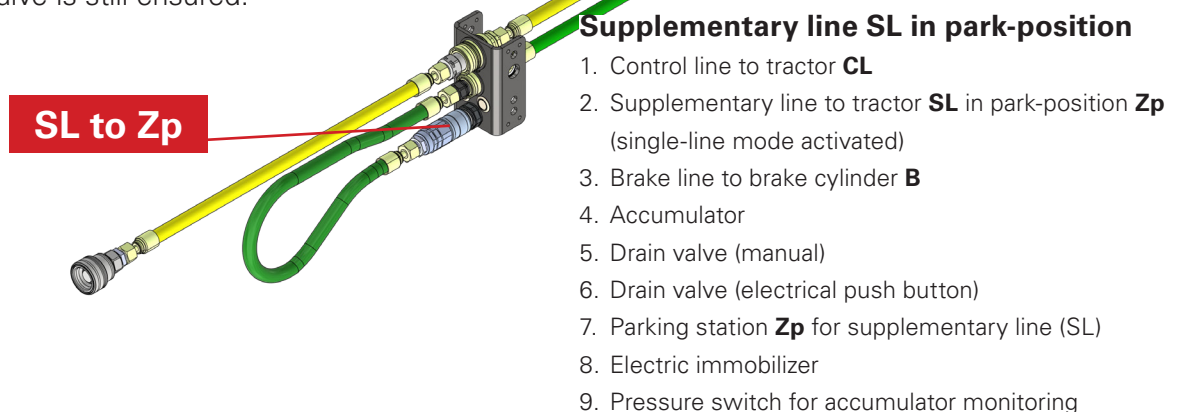
## Operation in dual-line mode

1. Control line to tractor **CL**
2. Supplementary line to tractor **SL**
3. Brake line to brake cylinder **B**
4. Accumulator
5. Drain valve (manual)
6. Drain valve (electrical push button)
7. Parking station **Zp** for supplementary line (SL)
8. Electric immobilizer
9. Pressure switch for accumulator monitoring



## Operation in single-line mode

If the supplementary line SL is connected to the "parking connector" **Zp** on the emergency brake valve and the immobilizer is supplied with electric power, this trailer can be operated with a tractor equipped with a single-line brake system. The possibility of triggering emergency braking by tearing off the electrical transmission device and the function of the immobilizer valve is still ensured.



## Supplementary line SL in park-position

1. Control line to tractor **CL**
2. Supplementary line to tractor **SL** in park-position **Zp** (single-line mode activated)
3. Brake line to brake cylinder **B**
4. Accumulator
5. Drain valve (manual)
6. Drain valve (electrical push button)
7. Parking station **Zp** for supplementary line (SL)
8. Electric immobilizer
9. Pressure switch for accumulator monitoring

# "NBV16..SC.." – Emergency brake valve kit

## Description

Dual-line emergency brake valve incl. Docking-Station with valve for elec. triggering of automatic- and secondary brake, accumulator monitoring, immobilizer and manual plus electric accumulator drain valve. Requirements of EU-Regulation 2015/68 and EU 2016/1788 confirmed by "TÜV NORD".

Order your sample now!  
(only small quantities available)



Item No.	Description	Scope of delivery
NBV16HE1-SC-DS-E-H15-012	Kit emergency brake valve	Emergency brake valve, Docking-Station, bladder accumulator 1,5 l, joint band console clamp, cable set with ABS plug, coupling set on both sides for control- and supplementary line (without hose lines).

## Adapter cable ABS 7-pole to COBO 3-pole

### Description

When trailers are equipped with H2L systems and will be combined with previous single line towing vehicles without ABS connector, the adapter cable supplies the immobilizer-valve integrated in the NBV16, with electricity.

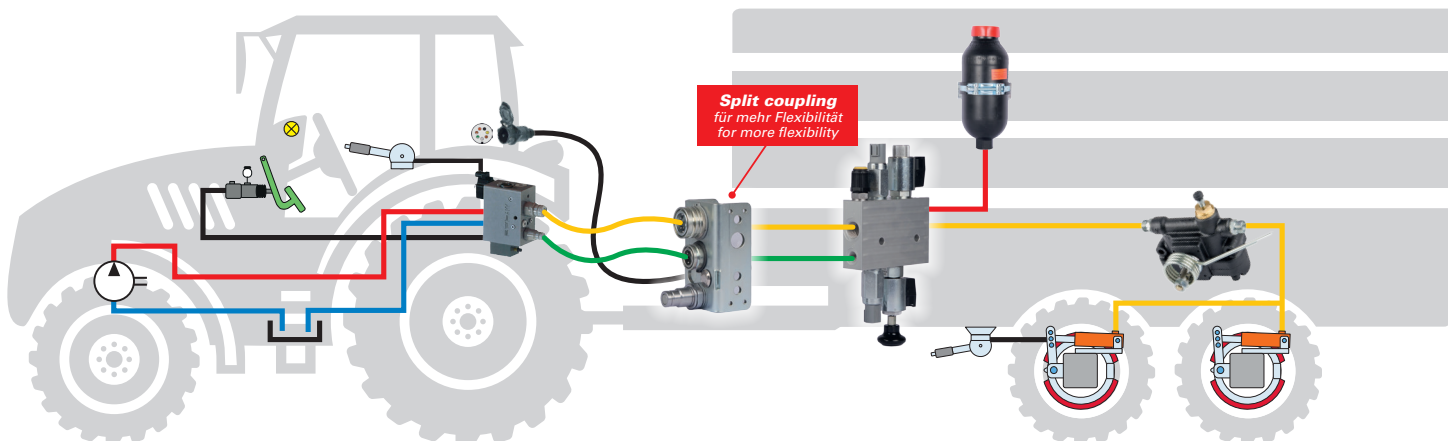
- Use only in conjunction with Paul Forrer NBV16 dual line system.
- EU VO 2015/68 paragraph 2.2.2.15.



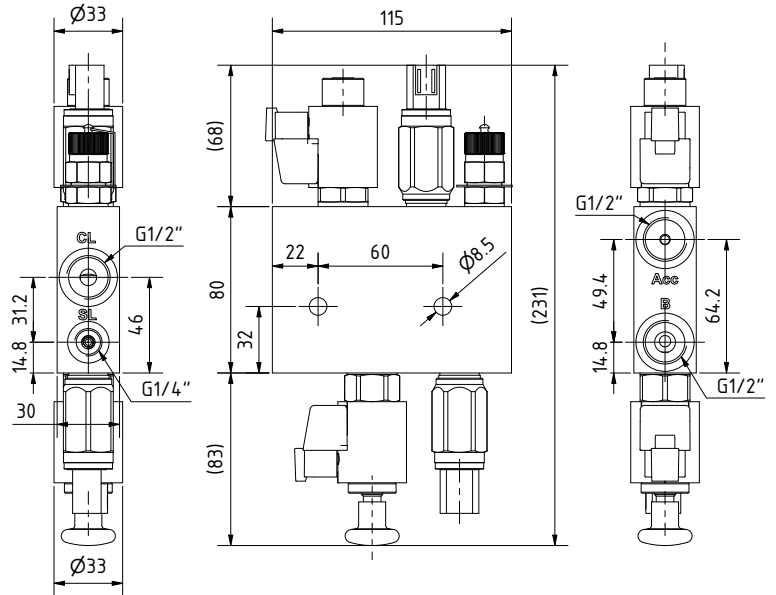
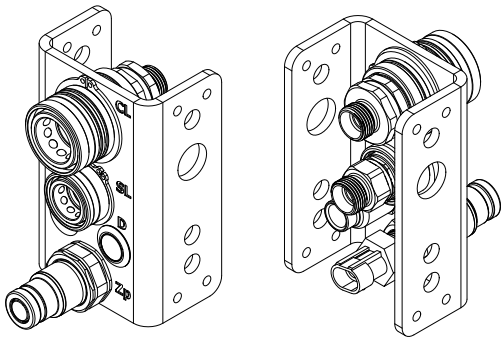
Item No.	Description	Scope of delivery
NBV16-ABS-3P-COBO-2000.1	Adapter cable for 1-line system	Assembled 2 m cable from ABS plug to COBO 3-pin. Plug. Supplies the immobilizer-valve with electrical energy from the towing vehicle in single-line use.

Example scheme of a typical hydraulic 2-line brake system with automatic braking force regulator

gemäß / in line with design requirements for REG (EU) 2015/68 as amended in REG (EU) 2016/1788



## "NBV16..SC.." Dimensions



### Technical Data

Operating pressure:	max. 150 bar
Pressure range in SL:	0 or 15-35 bar
Hydraulic oil:	DIN 51524
Filtration:	NAS 1638, CLASS 9
Temperature range:	-20 °C to +80 °C

### Technical Data Solenoid

Voltage:	12 V DC
Power:	2x 18 W
Current:	2x 1,8 A

### Technical Data Pressure Switch

Contact type:	normally closed
Setting:	55-60 bar
Switching current:	max. 2,5 A

### Connection ports

Break connection axle (B):	G1/2"-14
Control-Line (CL):	G1/2"-14
Supplementary-Line (SL)	G1/4"-19
Accumulator (Acc):	G1/2" -14
Measuring connection (Am):	Minimess M16x2

