

#### Function

The TEBS controlled **Lift Axle Valve** AE1141 is used for trailers with electronic braking systems to control the lift axle(s) fully automatically according to the vehicle load.

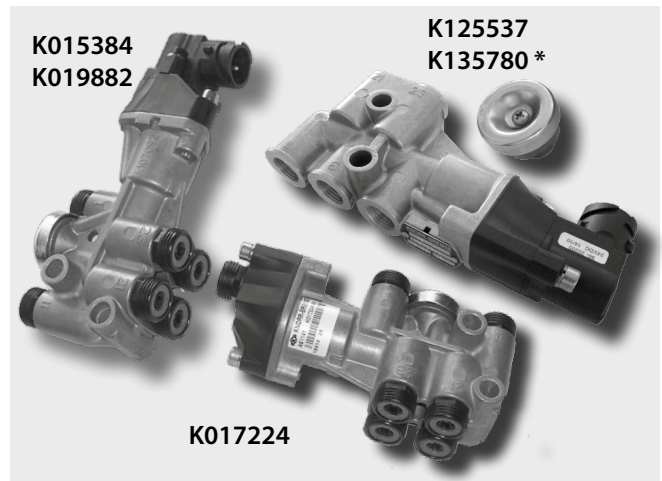
Within the product range there are variants available with a solenoid and those where control is purely pneumatic. Some variants are delivered with push-to connect (PTC) fittings, these variants have two ports "21" and two ports "23" to simplify the piping work.

The load sensing and the electronic control functions are achieved by the TEBS brake module via port "42". Without electric power supply, any lift axles are lowered.

The lift axle(s) can be lowered manually if the vehicle is unladen e.g. with the 3/2 Control Valve AE4265.

(Note: This is not permissible if the TEBS incorporates RSP. In this case the lift axle is lowered by an electrical or pneumatic signal sent from the TEBS brake module; see page 2)

The valve can also be used as a solenoid valve for other applications as lift axle control. System diagram examples can be found on page 3.

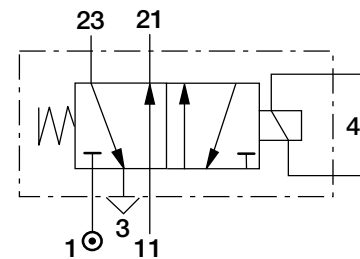


#### Technical Features

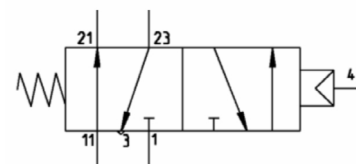
Maximum operating pressure:	10 bar
Operating temperature range:	-40 °C to +80 °C
Nominal voltage:	See table
Weight:	See table
Min. switching pressure for pneumatic version:	5 bar

#### Standard Symbol as DIN ISO 1219

K015384  
K019882  
K125537



K017224



\* Valve K135780 has a pneumatic connection (not shown) and valve K125537 has an electrical connection as shown on picture above.

#### Product Overview

Part No.	Type No.	Solenoid	Port 1 and 11	Port 21 and 23	Port 3	Port 4	Electrical Connection	Weight approx.
K125537 <sup>1)</sup>	AE 1141	24V	M16 x 1.5	M16 x 1.5	M16 x 1.5 (exhaust valve supplied but not fitted)	-	Bayonet DIN72585	0.40 kg
K015384 <sup>1)</sup>		24V	PTC <sup>2)</sup> R8x1	each 2 x PTC R8x1	exhaust valve fitted <sup>3)</sup> (not removable)	-		0.55 kg
K019882 <sup>1)</sup>		12V						0.55 kg
K017224 <sup>1)</sup>		-	M16 x 1.5	M16 x 1.5	M16 x 1.5 (exhaust valve supplied but not fitted)	PTC R8x1	-	0.55 kg
K135780 <sup>1)</sup>		-						0.40 kg

- 1) Part No. will carry the suffix N00 denoting that it is supplied without packaging.  
 2) PTC = push-to-connect.  
 3) Valves manufactured before the middle of 2015 had a M16x1.5 port fitted with an exhaust valve.

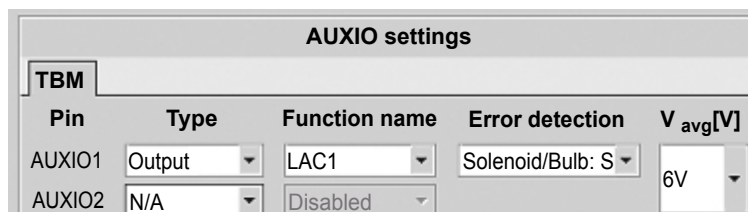
Additional Parts	Part No.
Blanking Plug for 8 mm pipe	96210008
PTC Release Tool (plastic) for 8 mm pipe	96608010
PTC Release Tool (metal) for 8 mm pipe	96608020

Part No. for Service Kit	
Solenoid - 12V	K020018K50
Solenoid - 24V	K016334K50

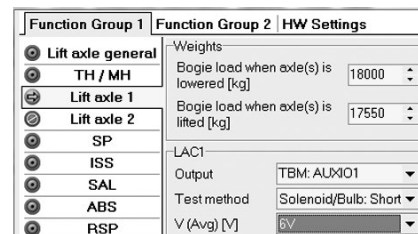
#### Installation Instructions

For electrically controlled valves:

When using the AE1141 – K019882 in conjunction with the TEBS G2 brake module, this valve needs to be connected to AUXIO1 or 2. The output voltage for these ports has to be set to 6 V (Note: This is necessary to protect the 12 V solenoid against overheating).

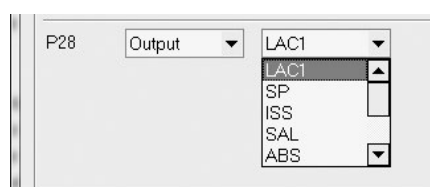


Screenshot from the diagnostic program ECUTalk®:  
 - TEBS G2.0, G2.1 and G2.2 Standard up to CN1023

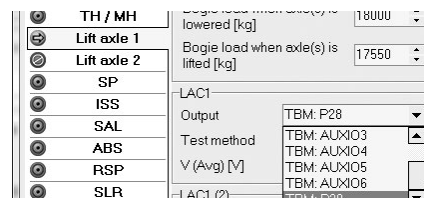


Screenshot from the diagnostic program ECUTalk®:  
 - TEBS G2.2 Standard (CN1030 and above), Standard Plus and Premium

For pneumatically controlled valves:



Screenshot from the diagnostic program ECUTalk®:  
 - TEBS G2.0, G2.1 and G2.2 Standard up to CN1023



Screenshot from the diagnostic program ECUTalk®:  
 - TEBS G2.2 Standard (CN1030 and above), Standard Plus and Premium

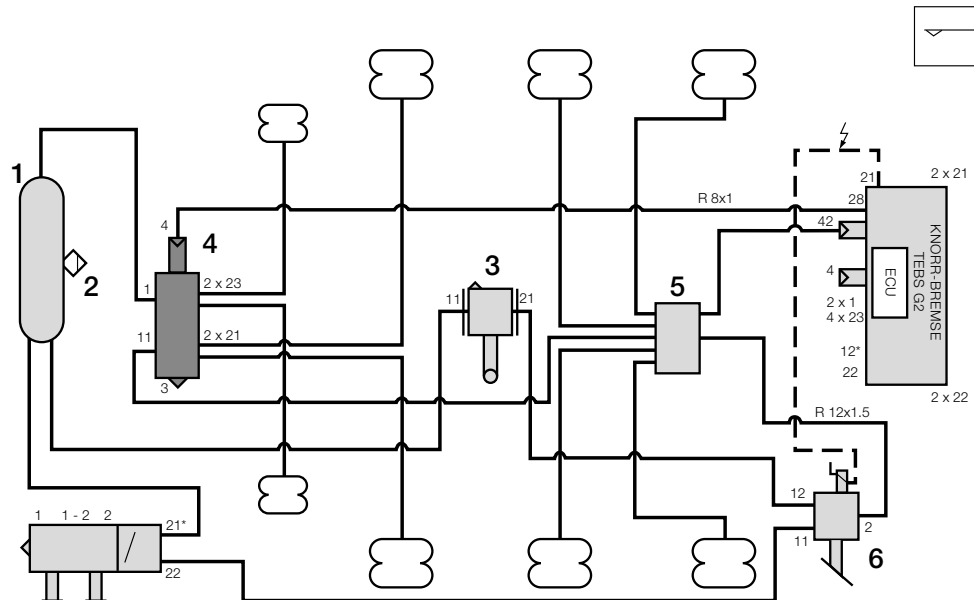
## AE1141

### Lift Axle Valves - TEBS controlled

#### System Diagrams

Schematic diagram of an Air suspension system for a 3 axle semi-trailer with raise/lower function, one fully automatic lift axle controlled by the TEBS G2 brake module.

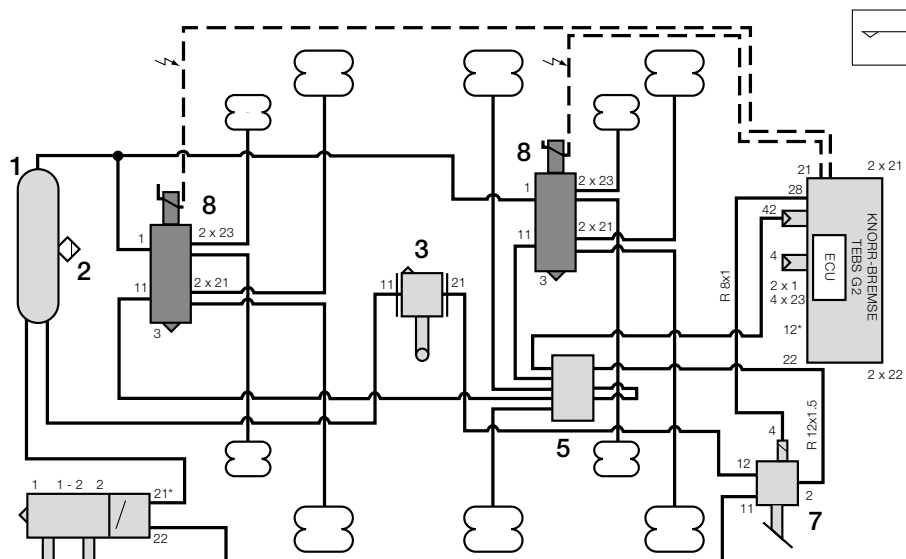
- 12\* - this port has different numbering:  
12 (TEBS G2.0)  
41 (TEBS G2.1)  
43 (TEBS G2.2)
- 21\* - this port has different numbering:  
21 (TEBS G2.0)  
22 (as of TEBS G2.1)



\*) not specified pipes: R 8x1

Schematic diagram of an Air suspension system for a 3 axle semitrailer with raise/lower function, two fully automatic lift axles controlled by the TEBS G2 brake module.

- 12\* - this port has different numbering:  
12 (TEBS G2.0)  
41 (TEBS G2.1)  
43 (TEBS G2.2)
- 21\* - this port has different numbering:  
21 (TEBS G2.0)  
22 (as of TEBS G2.1)



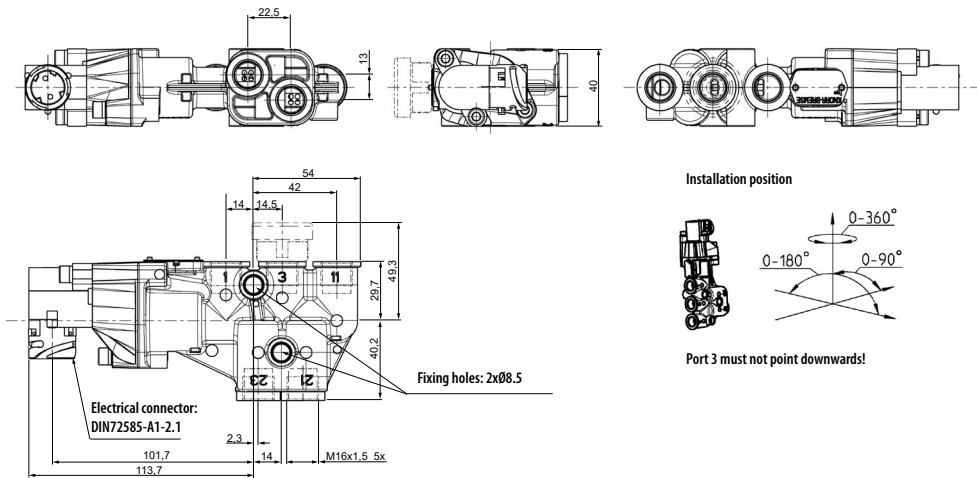
\*) not specified pipes: R 8x1

Pos.	Qty	Description
1	-	Reservoir
2	-	Drain Valve
3	1	Levelling Valve without height limitation
4	1	Lift Axle Valve, pneumatically controlled

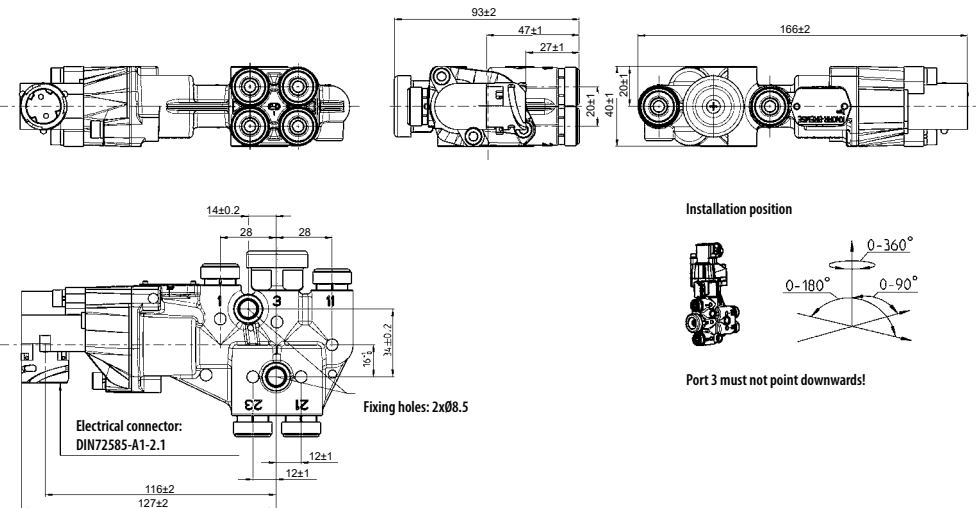
Pos.	Qty	Description
5	1	Distributor block
6	1	Raise/Lower Valve, electrically controlled
7	1	Raise/Lower Valve, pneumatically controlled
8	1	Lift Axle Valve, electrically controlled

#### Dimensions

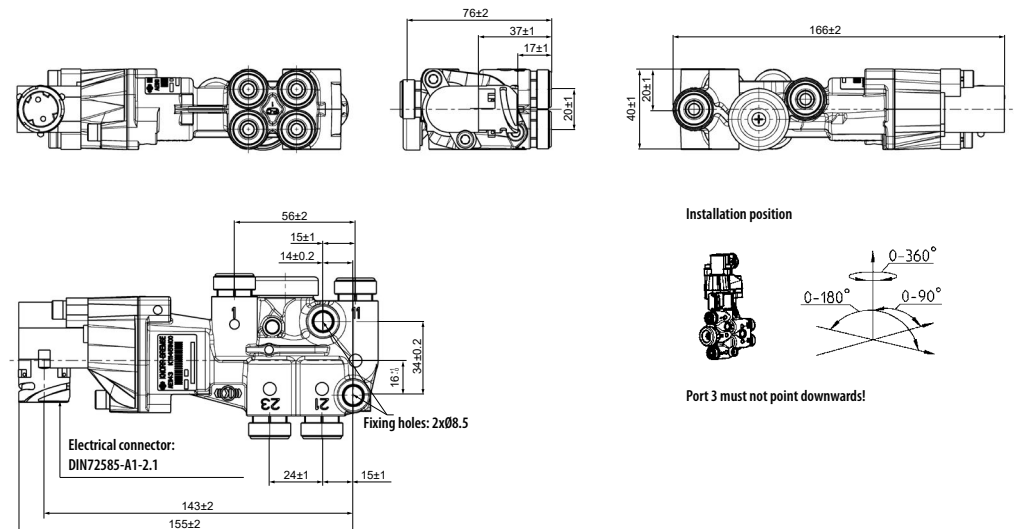
K125537



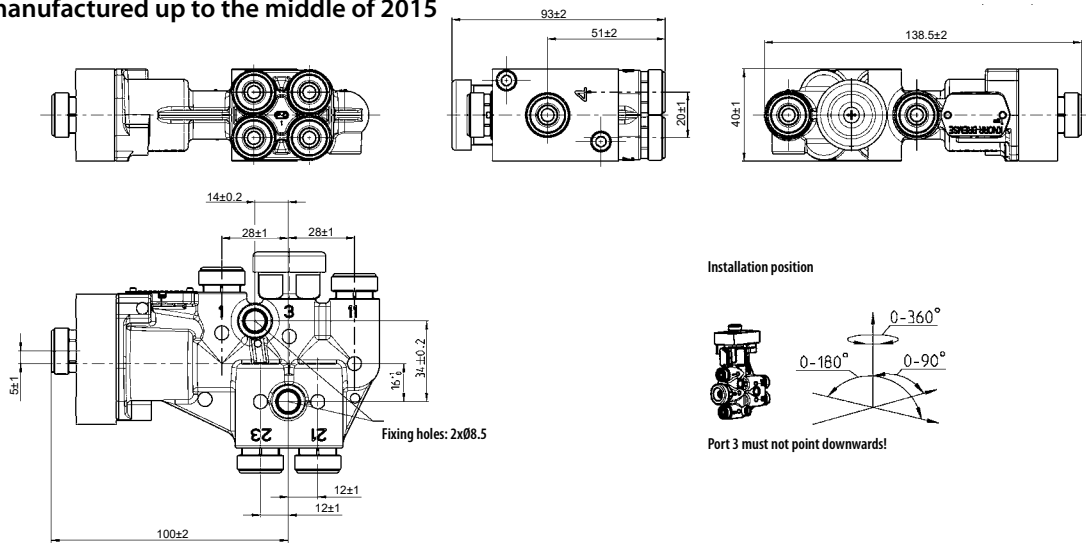
K015384 } manufactured up to the middle of 2015  
K019882 }



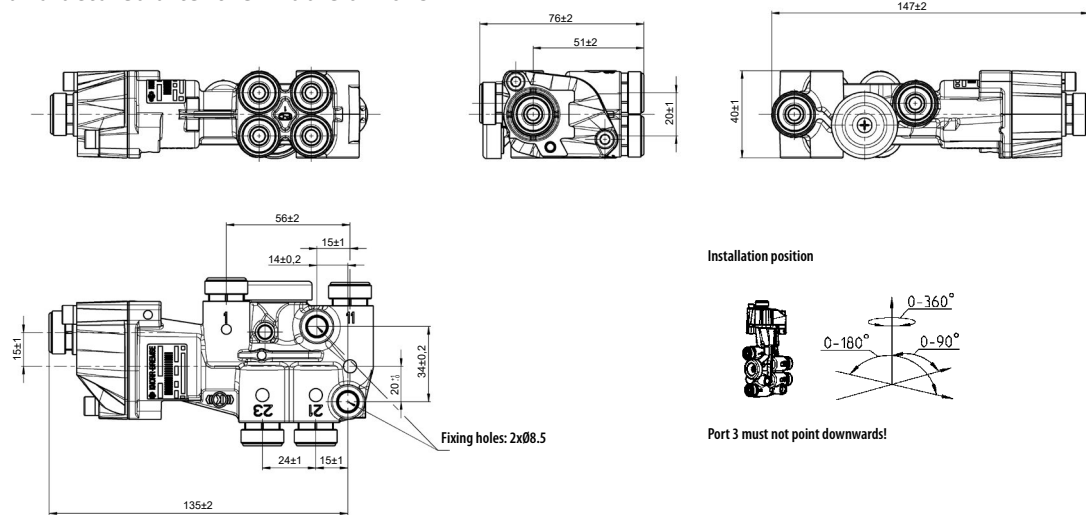
K015384 } manufactured after the middle of 2015  
K019882 }



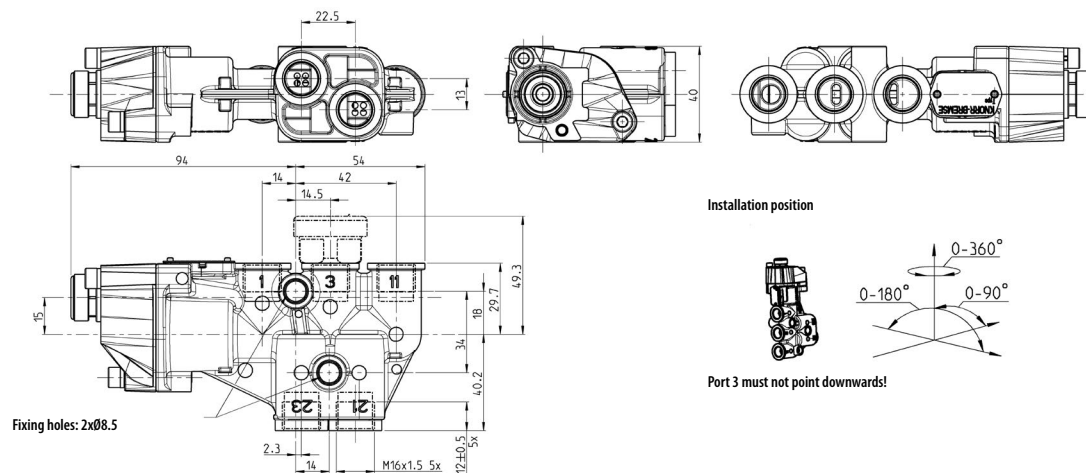
**K017224** manufactured up to the middle of 2015



**K017224** manufactured after the middle of 2015



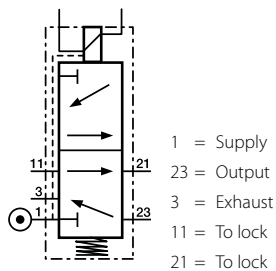
**K135780**



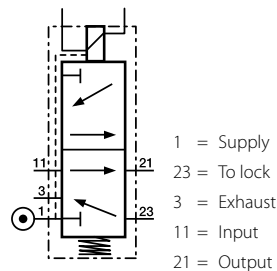
## System Diagrams

### Lift Axle Valves, electrically controlled

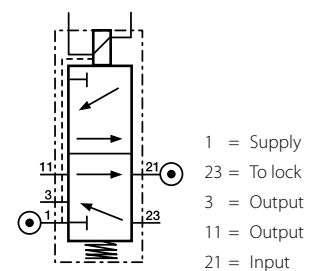
#### Supplied with current: Charged



#### Supplied with current: Exhausted



#### Supplied with current: Alternated circuit



## Revision Details

Rev. 006	April 2019	New Layout



Knorr-Bremse Group

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