



| Series     | Air-spring axles and suspensions            | Trailing arm 70 mm | BPW air bag |        | Axle type with drum brake |         |               | Ride height FH (mm) | Suspensions to drawing ALII-SN.0 Sheet-no. |
|------------|---|--------------------|-------------|--------|---------------------------|---------|---------------|---------------------|--|
|            |   |                    | 30/30K      | 36/36K | SN 4218                   | SN 3020 | SN 3620       |                     |  |
| ALO        |   | Single leaf        | •           | -      | HSF../HZF..               | ---     | ---           | 390-510             | Sheet 1                                    |
|            |   |                    | -           | •      |                           |         |               |                     | Sheet 2                                    |
|            | Steering axles LL with off-set trailing arm | Single leaf        | -           | -      | HSFH..LL                  | ---     | ---           | 430-510             | Sheet 3                                    |
|            |   |                    | -           | -      |                           |         |               |                     | Sheet 4                                    |
|            | Steering axles LL with trailing arm         |                    | -           | -      |                           |         |               |                     | Sheet 5                                    |
|            | Two-sided lifting device                    |                    |             |        |                           |         |               |                     | Sheet 6                                    |
|            |   |                    |             |        |                           |         |               | Sheet 7a            |  |
| ALM / ALMT |   | Single leaf        | •           | -      | HSF../HZF..               | ---     | ---           | 245-420             | Sheet 8                                    |
|            |   |                    | -           | •      |                           |         |               |                     | Sheet 9                                    |
|            | Steering axles LL with off-set trailing arm | Single leaf        | -           | -      | HSFH..LL                  | ---     | ---           | 255-420             | Sheet 10                                   |
|            |   |                    | -           | -      |                           |         |               | 350-420             | Sheet 11                                   |
|            | Steering axles LL with trailing arm         |                    | -           | -      |                           |         |               |                     | Sheet 12                                   |
|            | Two-sided lifting device                    |                    |             |        |                           |         |               |                     | Sheet 13                                   |
|            |   |                    |             |        |                           |         |               | Sheet 14a           |  |
| ALU        |   | Single leaf        | •           | -      | HSF../HZF..               | ---     | ---           | 175-300             | Sheet 15                                   |
|            |   |                    |             |        | ---                       | NHZF..  | ---           |                     | Sheet 15a                                  |
|            |   |                    |             |        | ---                       | ---     | KHSF../KHZF.. |                     | Sheet 15b                                  |
|            |   |                    | -           | •      | HSF../HZF..               | ---     | ---           |                     | Sheet 16                                   |
|            |   |                    |             |        | ---                       | NHZF..  | ---           |                     | Sheet 16a                                  |
|            |   |                    |             |        | ---                       | ---     | KHSF../KHZF.. |                     | Sheet 16b                                  |
|            | Steering axles LL with trailing arm         | Single leaf        | •           | -      | HSFH..LL                  | ---     | ---           | 215-300             | Sheet 17                                   |
|            | One-sided lifting device                    |                    |             |        |                           |         |               |                     | Sheet 17a                                  |
|            | Two-sided lifting device                    |                    |             |        |                           |         |               |                     | Sheet 19                                   |
|            |   |                    |             |        |                           |         |               | Sheet 19a           |  |



| Series             | Suspensions to drawing ALII-SN.0 Sheet-no. | Line    | Weight variations are within the permitted DIN tolerances for the production process, given in kg. |                           |   |         |               |               |         |         |         |     |         |     |
|--------------------|--|---------|--|---------------------------|---|---------|---------------|---------------|---------|---------|---------|-----|---------|-----|
|                    |  |         | Weights axle type HSF.. / HZF..  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  |         | Weight of air suspension parts   | Weight of axle attachment | FM 900  |         | FM 980        |               | FM 1200 |         | FM 1300 |     | FM 1400 |     |
| SP 1820            | SP 1820                                    | SP 1880 |  |                           | SP 2010   | SP 2040 | SP 2040 GM409 | SP 2040 GM671 | SP 2095 | SP 2095 | SP 2140 |     |         |     |
| ALO                | Sheet 1                                    | 1       | 96   | 31                        | 299   | 279     | 302           | 292           | 293     | 293     | 290     | 295 | 295     | 296 |
|                    |  | 2       | 101  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 3       | 105  |                           |   |         |               |               |         |         |         |     |         |     |
|                    | Sheet 2                                    | 1       | 102  | 31                        | 299   | 279     | 302           | 292           | 293     | 293     | 295     | 295 | 296     |     |
|                    |  | 2       | 106  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 3       | 111  |                           |   |         |               |               |         |         |         |     |         |     |
| ALM / ALMT         | Sheet 8                                    | 1       | 108  | 31                        | 299   | 279     | 302           | 292           | 293     | 293     | 290     | 295 | 295     | 296 |
|                    |  | 2       | 110  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 3       | 112  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 4       | 102  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 5       | 114  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 6       | 106  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 7       | 109  |                           |   |         |               |               |         |         |         |     |         |     |
|                    | Sheet 9                                    | 1       | 113  | 31                        | 299   | 279     | 302           | 292           | 293     | 293     | 295     | 295 | 296     |     |
|                    |  | 2       | 116  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 3       | 117  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 4       | 107  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 5       | 120  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 6       | 111  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 7       | 114  |                           |   |         |               |               |         |         |         |     |         |     |
| ALU                | Sheet 15                                   | 1       | 96   | 37                        | 299   | 279     | 302           | 292           | 293     | 293     | 290     | 295 | 295     | 296 |
|                    |  | 2       | 103  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 3       | 105  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 4       | 105  |                           |   |         |               |               |         |         |         |     |         |     |
|                    | Sheet 16                                   | 1       | 102  | 37                        | 299   | 279     | 302           | 292           | 293     | 293     | 295     | 295 | 296     |     |
|                    |  | 2       | 108  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 3       | 111  |                           |   |         |               |               |         |         |         |     |         |     |
|                    |  | 4       | 111  |                           |   |         |               |               |         |         |         |     |         |     |
| Sheet 7a, 14a, 19a |  |         |  |                           | Two-sided lifting device with support                 |         | = 34 kg       |               |         |         |         |     |         |     |
|                    |  |         |  |                           | Two-sided lifting device channel cross member version |         | = 33 kg       |               |         |         |         |     |         |     |
| Sheet 19           |  |         |  |                           | One-sided lifting device                              |         | = 29 kg       |               |         |         |         |     |         |     |

SP = track  
FM = spring centre  
GM = booster bracket centre

### Additional weight per axle

Bolt-on brackets = 8 kg  
Axle beam from 120x10 to 120x15 = 0.0115 kg x track (SP)

| Serie     | Leaf spring         |                     |                     | Additional weight per axle in kg |
|-----------|---------------------|---------------------|---------------------|----------------------------------|
|           | Link length L1 (mm) | Link length L2 (mm) | Link Thickness (mm) |                                  |
| ALO / ALU | 500                 | 380                 | 1x56                | 4.0 <sup>1)</sup>                |
|           |                     |                     | 1x62                | 9.4 <sup>1)</sup>                |
| ALO / ALU | 500                 | 310                 | 1x62                | 2.4 <sup>1)</sup>                |
| ALM       | 500                 | 380                 | 1x62                | 5.6 <sup>2)</sup>                |
| ALMT      | 500                 | 380                 | 1x62                | 3.6 <sup>2)</sup>                |

1) Additional weight on link 500/310 (1x56)

2) Additional weight on link 500/380 (1x56)

#### Determining the total weight

Air suspension parts

+ Axle attachment

+ Axle

+ Additional weight

= Total weight



| Series   | Suspensions to drawing ALII-SN.0 Sheet-no. | Line    | Weight variations are within the permitted DIN tolerances for the production process, given in kg. |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|----------|--|---------|--|---------------------------|---------|---------|---------|---------|---------|---------|---------|---------|-----|---------|--|--|
|          |  |         | <b>Axle weights type KH.. / NH..</b>   |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          |  |         | Weight of air suspension parts   | Weight of axle attachment | FM 980  |         |         |         | FM 1100 |         |         | FM 1200 |     | FM 1300 |  |  |
| SP 1830  | SP 1835                                    | SP 1880 |  |                           | SP 1885 | SP 1935 | SP 1950 | SP 1995 | SP 2040 | SP 2045 | SP 2040 | SP 2045 |     |         |  |  |
| ALU      | Sheet 15a                                  | 1       | 96   | 37                        | 265     |         | 285     |         |         | 271     | 291     |         |     |         |  |  |
|          |  | 2       | 103  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          |  | 3       | 105  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          |  | 4       | 105  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          | Sheet 15b                                  | 1       | 96   | 37                        |         | 295     |         | 316     | 299     |         | 306     | 303     | 306 | 303     |  |  |
|          |  | 2       | 103  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          |  | 3       | 105  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          |  | 4       | 105  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          | Sheet 16a                                  | 1       | 102  | 37                        | 265     |         | 285     |         |         | 271     | 291     |         |     |         |  |  |
|          |  | 2       | 108  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          |  | 3       | 111  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          |  | 4       | 111  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          | Sheet 16b                                  | 1       | 102  | 37                        |         | 295     |         | 316     | 299     |         | 306     | 303     | 306 | 303     |  |  |
|          |  | 2       | 108  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          |  | 3       | 111  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
|          |  | 4       | 111  |                           |         |         |         |         |         |         |         |         |     |         |  |  |
| Sheet 19 |  |         | One-sided lifting device = 29 kg   |                           |         |         |         |         |         |         |         |         |     |         |  |  |

### Additional weight per axle

Bolt-on brackets = 8 kg  
Axle beam from 120x10 to 120x15 = 0.0115 kg x track (SP)

| Serie | Leaf spring         |                     |                     | Additional weight per axle |
|-------|---------------------|---------------------|---------------------|----------------------------|
|       | Link length L1 (mm) | Link length L2 (mm) | Link thickness (mm) |                            |
| ALU   | 500                 | 380                 | 1x56                | 4.0 <sup>1)</sup>          |
|       |                     |                     | 1x62                | 9.4 <sup>1)</sup>          |
| ALU   | 500                 | 310                 | 1x62                | 2.4 <sup>1)</sup>          |

1) Additional weight on link 500/310 (1x56)

- Determining the total weight
- Air suspension parts
- + Axle attachment
- + Axle
- + Additional weight
- = Total weight



| Series         | Suspensions to drawing<br>ALII-SN.0 Sheet-no. | Line     | Weight variations are within the permitted DIN tolerances for the production process, given in kg. |                           |         |         |         |     |        |     |
|----------------|---|----------|--|---------------------------|---------|---------|---------|-----|--------|-----|
|                |   |          | Axle weights HSFH..LL / NHZF..LL   |                           |         |         |         |     |        |     |
|                |   |          | Weight of air suspension parts   | Weight of axle attachment | FM 980  |         | FM 1080 |     | FM 840 |     |
| SP 2040        | SP 2040                                       | SP 2095  |  |                           | SP 2140 | SP 1945 | SP 1985 |     |        |     |
| ALOLL          | Sheet 3                                       | 2        | 106  | 31                        | 442     | 442     | 444     | 447 |        |     |
|                |   | 3        | 110  |                           |         |         |         |     |        |     |
|                | Sheet 4                                       | 2        | 111  | 31                        | 442     | 442     | 444     | 447 |        |     |
|                |   | 3        | 115  |                           |         |         |         |     |        |     |
|                | Sheet 5                                       | 2        | 101  | 31                        | 442     | 442     | 444     | 447 |        |     |
|                |   | 3        | 105  |                           |         |         |         |     |        |     |
|                | Sheet 6                                       | 2        | 106  | 31                        | 442     | 442     | 444     | 447 |        |     |
|                |   | 3        | 111  |                           |         |         |         |     |        |     |
| ALMTLL / ALMLL | Sheet 10                                      | 1        | 110  | 31                        | 442     | 442     | 444     | 447 |        |     |
|                |   | 2        | 113  |                           |         |         |         |     |        |     |
|                |   | 5        | 117  |                           |         |         |         |     |        |     |
|                |   | 6        | 109  |                           |         |         |         |     |        |     |
|                |   | 7        | 111  |                           |         |         |         |     |        |     |
|                | Sheet 11                                      | 6        | 114  | 31                        | 442     | 442     | 444     | 447 |        |     |
|                |   | 7        | 116  |                           |         |         |         |     |        |     |
|                | Sheet 12                                      | 6        | 106  | 31                        | 442     | 442     | 444     | 447 |        |     |
|                |   | 7        | 109  |                           |         |         |         |     |        |     |
|                | Sheet 13                                      | 6        | 111  | 31                        | 442     | 442     | 444     | 447 |        |     |
|                |   | 7        | 114  |                           |         |         |         |     |        |     |
|                | ALULL   | Sheet 17 | 2  | 107                       | 37      | 442     |         | 441 | 444    |     |
| 3              |   |          | 109  |                           |         |         |         |     |        |     |
| 4              |   |          | 109  |                           |         |         |         |     |        |     |
| Sheet 17a      |   | 2        | 112  | 37                        |         |         |         |     | 436    | 437 |
|                |   | 3        | 115  |                           |         |         |         |     |        |     |
|                |   | 4        | 115  |                           |         |         |         |     |        |     |

## Additional weight per axle

Bolt-on brackets = 8 kg  
Steering damper parts kit = 2 kg

| Serie              | Leaf spring         |                     |                     | Additional weight per axle in kg |
|--------------------|---------------------|---------------------|---------------------|----------------------------------|
|                    | Link length L1 (mm) | Link length L2 (mm) | Link thickness (mm) |                                  |
| ALOLL Sheet 3, 4   | 500                 | 380                 | 1x62                | 7.0 <sup>1)</sup>                |
| ALOLL Sheet 5, 6   | 500                 | 380                 | 1x56                | 4.0 <sup>2)</sup>                |
|                    |                     |                     | 1x62                | 9.4 <sup>2)</sup>                |
| ALOLL Sheet 5, 6   | 500                 | 310                 | 1x62                | 2.4 <sup>2)</sup>                |
| ALMLL Sheet 12, 13 | 500                 | 380                 | 1x62                | 5.6 <sup>3)</sup>                |
| ALULL Sheet 17     | 500                 | 380                 | 1x62                | 5.4 <sup>3)</sup>                |

- 1) Additional weight on link 500/310 (1x62)  
2) Additional weight on link 500/310 (1x56)  
3) Additional weight on link 500/380 (1x56)

### Determining the total weight

Air suspension parts

+ Axle attachment

+ Axle

+ Additional weight

= Total weight



| Series               | Suspensions to drawing ALII-SN.0 Sheet-no.               | Trailing arm 05.082..                              | Leaf thickness | L1  | L2   | Axle load in Kg | Height of centre of gravity max. Spring centre FM |      |      |      |      |      |
|----------------------|--|--|----------------|-----|------|-----------------|---|------|------|------|------|------|
|                      |  |  |                |     |      |                 | Preferred row                                     |      |      |      |      |      |
|                      |  |  |                |     |      |                 | 900   | 980  | 1080 | 1200 | 1300 | 1400 |
| ALO                  | Sheet 1  | ..13.90.2  | 1x56           | 500 | 310  | 8000            | 2250  | 2400 |      | 2800 | 3000 | 3200 |
|                      |  |  |                |     |      | 9000            | ---   | ---  |      | 2500 | 2700 | 2850 |
|                      |  | ..13.89.2  |                |     | 310  | 8000            | 2250  | 2400 |      | 2800 | 3000 | 3200 |
|                      |  |  |                |     |      | 9000            | ---   | ---  |      | 2500 | 2700 | 2850 |
|                      | Sheet 2  | ..13.96.2  | 1x62           | 500 | 380  | 8000            | 2750  | 2950 |      | ---  | ---  | ---  |
|                      |  |  |                |     |      | 9000            | 2450  | 2650 |      | 3100 | 3300 | 3500 |
|                      |  | ..14.02.2  |                |     | 310  | 8000            | 2750  | 2950 |      | ---  | ---  | ---  |
|                      |  |  |                |     |      | 9000            | 2450  | 2650 |      | 3100 | 3300 | 3500 |
|                      | Sheet 3  | ..14.23.2<br>..14.24.2                             | 1x62           | 500 | 310  | 8000            |   | 2950 | 3150 |      |      |      |
|                      |  |  |                |     |      | 9000            |   | 2650 | 2850 |      |      |      |
|                      | Sheet 4  | ..13.93.2<br>..13.94.2                             |                |     | 380  | 8000            |   | 2950 | 3150 |      |      |      |
|                      |  |  |                |     |      | 9000            |   | 2650 | 2850 |      |      |      |
| ALM / ALMT           | Sheet 5<br>Sheet 6                                       | ..13.90.2  | 1x56           | 500 | 310  | 8000            |   | 2400 | 2550 |      |      |      |
|                      |  |  |                |     |      | 9000            |   | 2150 | 2300 |      |      |      |
|                      |  | ..13.89.2  |                |     | 380  | 8000            |   | 2400 | 2550 |      |      |      |
|                      |  |  |                |     |      | 9000            |   | 2150 | 2300 |      |      |      |
|                      | Sheet 8<br>Sheet 9                                       | ..13.88.2 <sup>1)</sup><br>..14.09.2 <sup>2)</sup> | 1x56           | 500 | 380  | 8000            | 2250  | 2400 |      | 2800 | 3000 | 3200 |
|                      |  |  |                |     |      | 9000            | ---   | ---  |      | 2500 | 2700 | 2850 |
|                      |  | ..13.95.2 <sup>1)</sup><br>..14.12.2 <sup>2)</sup> | 1x62           |     | 8000 | 2750            | 2950  |      | ---  | ---  | ---  |      |
|                      |  |  |                |     | 9000 | 2450            | 2650  |      | 3100 | 3300 | 3500 |      |
| Sheet 10<br>Sheet 11 | ..13.91/92.2 <sup>1)</sup><br>..14.13/14.2 <sup>2)</sup> | 1x62   | 500            | 380 | 8000 |                 | 2950  | 3150 |      |      |      |      |
|                      |  |  |                |     | 9000 |                 | 2650  | 2850 |      |      |      |      |
| Sheet 12<br>Sheet 13 | ..13.88.2 <sup>1)</sup>                                  | 1x56   | 500            | 380 | 8000 |                 | 2400  | 2550 |      |      |      |      |
|                      |  |  |                |     | 9000 |                 | 2150  | 2300 |      |      |      |      |
| Sheet 12<br>Sheet 13 | ..13.95.2 <sup>1)</sup>                                  | 1x62   | 500            | 380 | 8000 |                 | 2950  | 3150 |      |      |      |      |
|                      |  |  |                |     | 9000 |                 | 2650  | 2850 |      |      |      |      |

| Series | Suspensions to drawing ALII-SN.0 Sheet-no.                               | Trailing arm 05.082.. | Leaf thickness | L1  | L2  | Axle load in Kg | Height of centre of gravity max. Spring centre FM |      |      |      |      |      |      |      |
|--------|--|-----------------------|----------------|-----|-----|-----------------|---|------|------|------|------|------|------|------|
|        |  |                       |                |     |     |                 | Preferred row                                     |      |      |      |      |      |      |      |
|        |  |                       |                |     |     |                 | 840   | 900  | 980  | 1080 | 1100 | 1200 | 1300 | 1400 |
| ALU    | Sheet 15<br>Sheet 15a<br>Sheet 15b<br>Sheet 16<br>Sheet 16a<br>Sheet 16b | ..13.90.2             | 1x56           | 500 | 310 | 8000            |   | 2000 | 2100 |      | 2300 | 2500 | 2650 | 2850 |
|        |  |                       |                |     |     | 9000            |   | ---  | ---  |      | 2050 | 2200 | 2350 | 2550 |
|        |  | ..13.89.2             |                |     | 310 | 8000            |   | 2000 | 2100 |      | 2300 | 2500 | 2650 | 2850 |
|        |  |                       |                |     |     | 9000            |   | ---  | ---  |      | 2050 | 2200 | 2350 | 2550 |
|        | Sheet 17   | ..13.96.2             | 1x62           | 500 | 380 | 8000            |   | 2400 | 2650 |      | ---  | ---  | ---  | ---  |
|        |  |                       |                |     |     | 9000            |   | 2100 | 2250 |      | 2500 | 2700 | 2900 | 3100 |
|        |  | ..14.02.2             |                |     | 310 | 8000            |   | 2400 | 2650 |      | ---  | ---  | ---  | ---  |
|        |  |                       |                |     |     | 9000            |   | 2100 | 2250 |      | 2500 | 2700 | 2900 | 3100 |
|        | Sheet 17a  | ..13.96.2             | 1x62           | 500 | 380 | 8000            | 2300  |      |      |      |      |      |      |      |
|        |  |                       |                |     |     | 9000            | 2000  |      |      |      |      |      |      |      |

Determining the height of the centre of gravity for axle units with a steering axle

$$\frac{\text{Height of centre of gravity of rigid axles} + \text{Height of centre of gravity of steering axles}}{\text{Number of axles}} = \text{Height of centre of gravity}$$

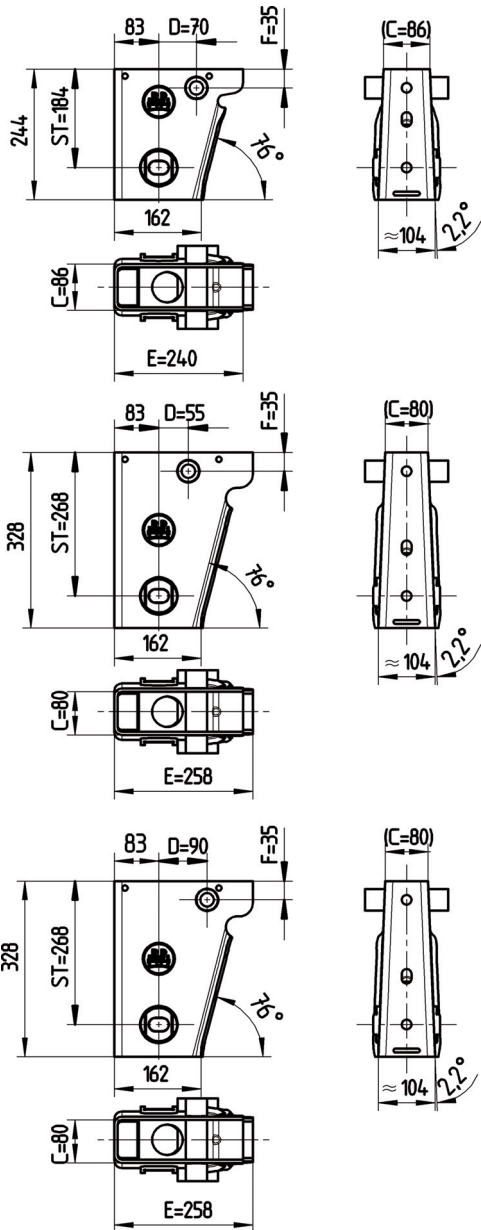
For example:

$$\frac{2500 + 2500 + 2200}{3} = 2400$$

Calculation reference:

0.4 g transverse acceleration lateral body tilt approx. 3.5 degrees without taking into consideration the tilt limit and the tyre deflection.

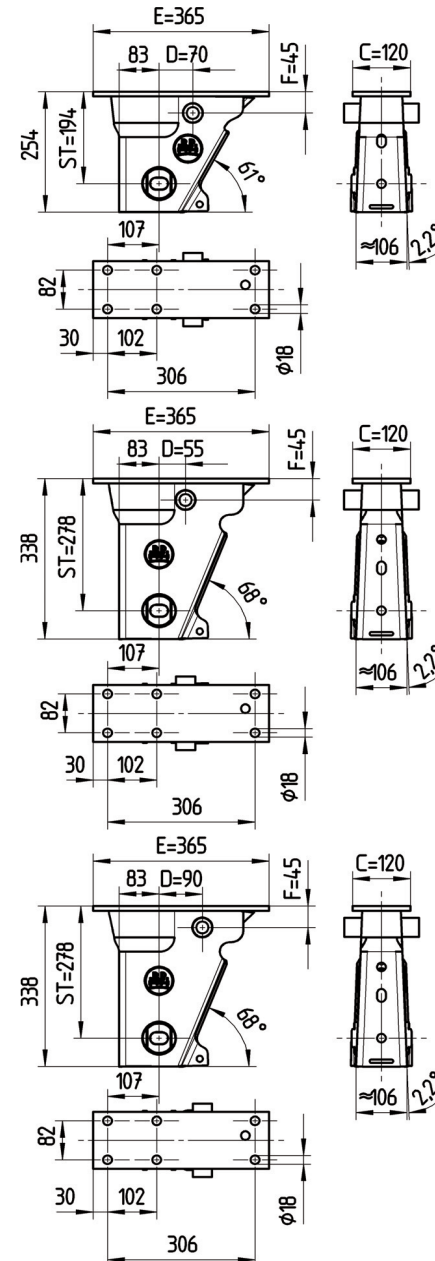
- 1) Series ALM
- 2) Series ALMT



### Standard brackets AL II

Note:  
The hanger brackets and the frame  
must be reinforced so that the forces  
applied can be absorbed.

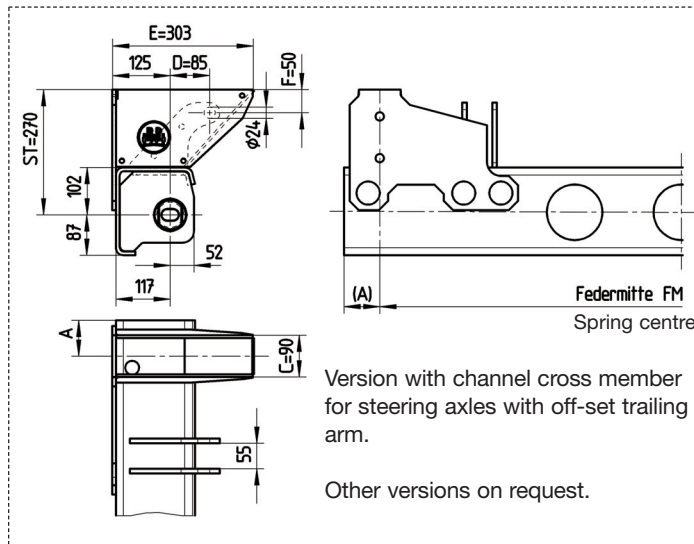
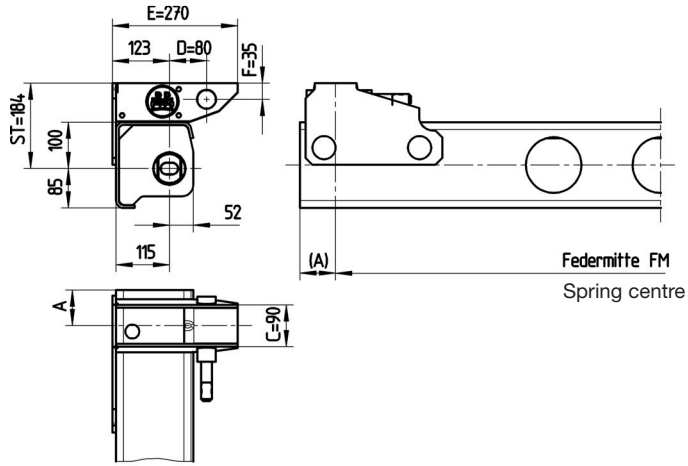
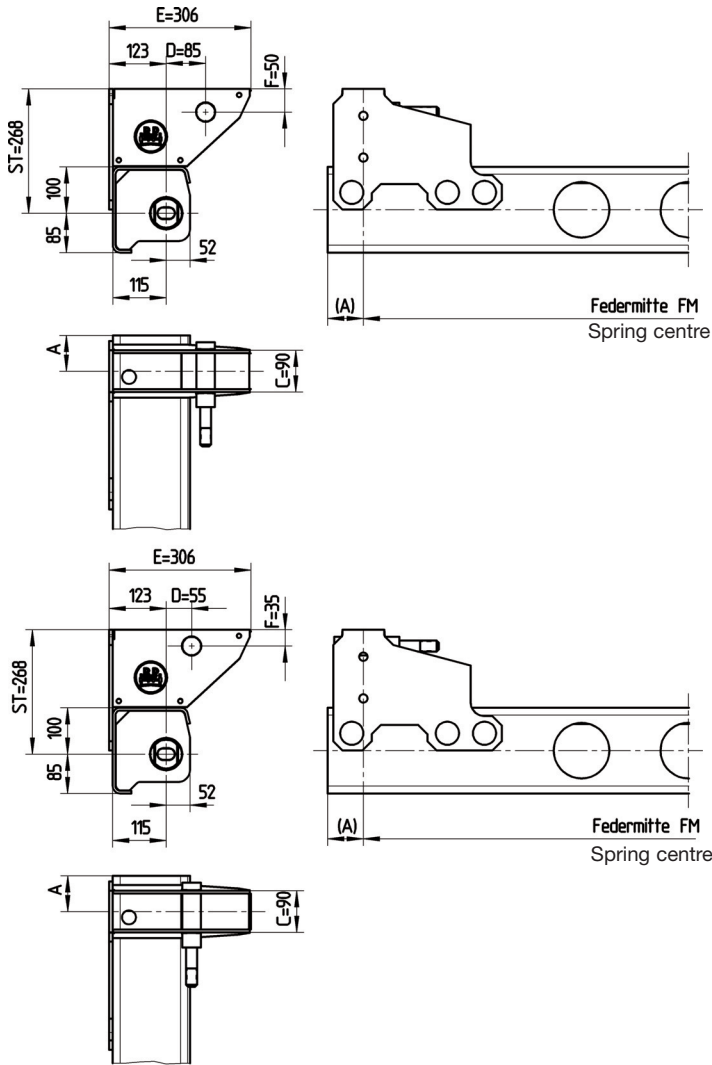
See the current BPW installation  
instructions.



### Bolt-on brackets AL II

Note:  
The hanger brackets and the frame must  
be reinforced so that the forces applied  
can be absorbed.

See the current Installation instructions  
C-04.00.509610



| Measure A | For spring centre FM |      |      |      |      |
|-----------|----------------------|------|------|------|------|
|           | 980                  | 1100 | 1200 | 1300 | 1400 |
| 77        | 87                   | 77   | 77   | 77   | 77   |

Note:

The frame must be reinforced so that the forces applied can be absorbed.

See the current BPW installation instructions.

For example:

Air spring axle with channel cross member

HSFALO 9010 **C V30** → Version with channel cross member

Version with channel cross member for steering axles with off-set trailing arm.

Other versions on request.

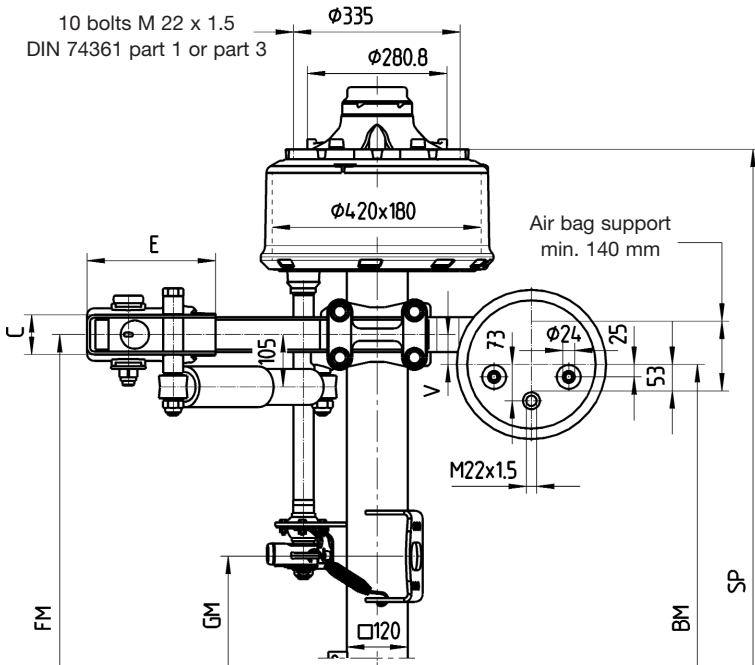
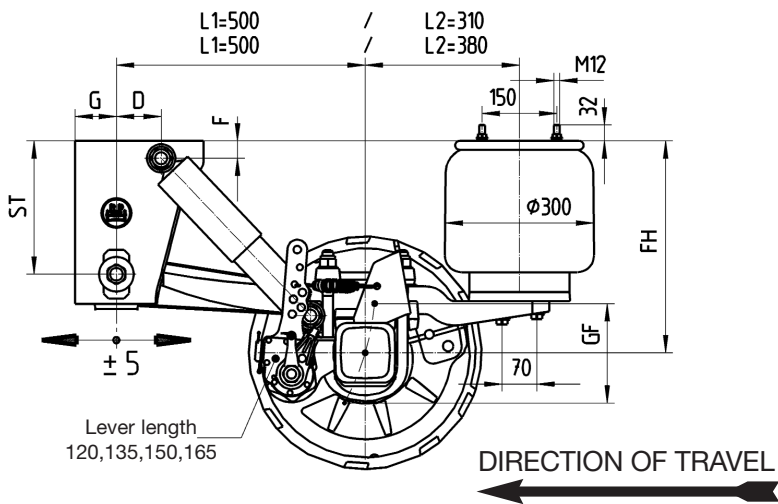


# Airlight II

Air-spring axle with drum brake SN 4218  
Series HSFALO 9010 V30K/V30 HZFALO 9010 V30K/V30

Ride height 390-510 mm  
for trailer and semi-trailer

AL II-SN.0  
Sheet-no. 1



| Line | Series | ≈ adjustable ride height FH |                |                          |                   |                    | Total spring travel (GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    |
|------|--------|-----------------------------|----------------|--------------------------|-------------------|--------------------|---------------------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|
|      |        | for single axles            | for axle units | min. FH with axle raised | Empty without air | Loaded without air |                                       |         |                         | ST             | C  | E   | G  | D                    | F  |
| 1    | ALO    | 390-430                     | 400-430        | 430                      | 330               | 315                | 190                                   | 30K     | ..22.83.00              | 184            | 86 | 240 | 83 | 70                   | 35 |
| 2    | ALO    | 420-470                     | 430-470        | 460                      | 360               | 345                | 190                                   | 30K     | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |
| 3    | ALO    | 450-510                     | 460-510        | 490                      | 390               | 375                | 220                                   | 30      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 |

<sup>1)</sup> Lifting heights acc. to TD-1242.0

<sup>2)</sup> Only suitable for semi-trailer / Centre axle drawbar trailer

<sup>3)</sup> M = for diaphragm cylinder / F = for spring brake cylinder

<sup>4)</sup> at V=60 only diaphragm cylinder

<sup>5)</sup> V=20 only with trailing arm L1=500 / L2=380

| Axle type   | Track SP | Spring centre FM | Air cylinder centre GM | Air bag centre BM  |      | Brake-cyl. <sup>3)</sup> | Tyres recommended              |
|-------------|----------|------------------|------------------------|--------------------|------|--------------------------|--------------------------------|
|             |          |                  |                        | V=20               | V=60 |                          |                                |
| HSFALO 9010 | 2010     | 1200             | 379                    | 1160               | 1080 | M / F                    | 385/65 R 22.5<br>385/55 R 22.5 |
| HSFALO 9010 | 2040     | 1200             | 409                    | 1160               | 1080 | M / F                    |                                |
| HSFALO 9010 | 2040     | 1300             | 409                    | 1260 <sup>5)</sup> | 1180 | M / F                    |                                |
| HSFALO 9010 | 2040     | 1300             | 671                    | 1260 <sup>5)</sup> | 1180 | M / (F) <sup>4)</sup>    |                                |
| HSFALO 9010 | 2095     | 1300             | 464                    | 1260               | 1180 | M / F                    |                                |
| HSFALO 9010 | 2095     | 1400             | 464                    | ----               | 1280 | M / F                    |                                |
| HSFALO 9010 | 2140     | 1400             | 585                    | 1360 <sup>5)</sup> | 1280 | M / F                    | 275/70 R 22.5                  |
| HZFALO 9010 | 1820     | 900              | 239                    | 860                | 780  | M / (F) <sup>4)</sup>    |                                |
| HZFALO 9010 | 1820     | 980              | 239                    | ----               | 860  | M / F                    |                                |
| HZFALO 9010 | 1880     | 980              | 259                    | 940                | 860  | M / F                    |                                |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height  $\pm 1^\circ$

With trailing arm L1=500 / L2=310, bag pressures acc. to TE-1188.0 sheet 18

With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 15

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

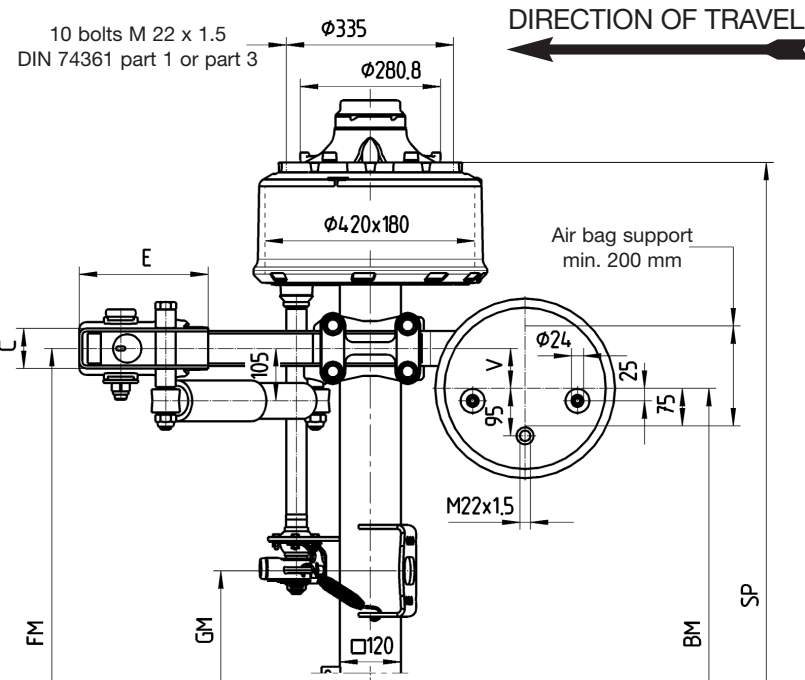
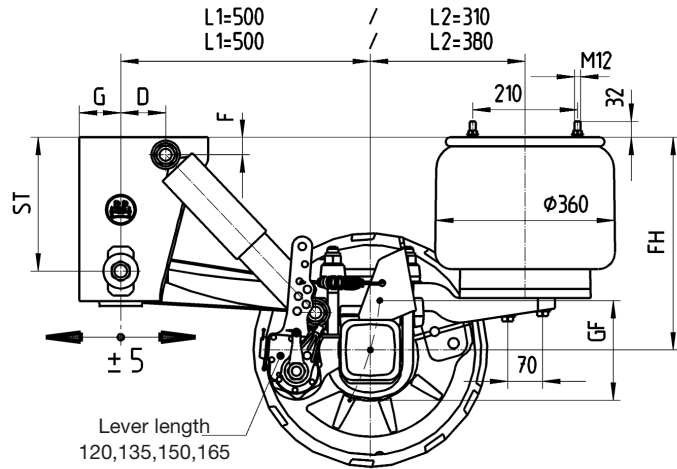


# Airlight II

Air-spring axle with drum brake SN 4218  
Series HSFALO 9010 V36K/V36 HZFALO 9010 V36K/V36

Ride height 390-510 mm  
for trailer and semi-trailer

AL II-SN.0  
Sheet-no. 2



| Line | Series | ~ adjustable ride height FH |                |                          |                   |                    | Total spring travel GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    |
|------|--------|-----------------------------|----------------|--------------------------|-------------------|--------------------|--------------------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|
|      |        | for single axles            | for axle units | min. FH with axle raised | Empty without air | Loaded without air |                                      |         |                         | ST             | C  | E   | G  | D                    | F  |
| 1    | ALO    | 390-430                     | 400-430        | 430                      | 330               | 315                | 190                                  | 36K     | ..22.83.00              | 184            | 86 | 240 | 83 | 70                   | 35 |
| 2    | ALO    | 420-470                     | 430-470        | 460                      | 360               | 345                | 190                                  | 36K     | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |
| 3    | ALO    | 450-510                     | 460-510        | 490                      | 390               | 375                | 220                                  | 36      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 |

<sup>1)</sup> Lifting heights acc. to TD-1242.0

<sup>2)</sup> Only suitable for semi-trailer / Centre axle drawbar trailer

<sup>3)</sup> M = for diaphragm cylinder / F = for spring brake cylinder

| Axle type   | Track SP | Spring centre FM | Air cylinder centre GM | Air bag centre BM | Brake cyl. <sup>3)</sup> | Tyres recommended |
|-------------|----------|------------------|------------------------|-------------------|--------------------------|-------------------|
|             |          |                  |                        | V=80              |                          |                   |
| HSFALO 9010 | 2010     | 1200             | 379                    | 1040              | M / F                    | 385/65 R 22.5     |
| HSFALO 9010 | 2040     | 1200             | 409                    | 1040              | M / F                    |                   |
| HSFALO 9010 | 2040     | 1300             | 409                    | 1140              | M / F                    |                   |
| HSFALO 9010 | 2095     | 1300             | 464                    | 1140              | M / F                    | 385/55 R 22.5     |
| HSFALO 9010 | 2140     | 1400             | 585                    | 1240              | M / F                    | 275/70 R 22.5     |
| HZFALO 9010 | 1820     | 900              | 239                    | 740               | M                        |                   |
| HZFALO 9010 | 1820     | 980              | 239                    | 820               | M                        |                   |
| HZFALO 9010 | 1880     | 980              | 259                    | 820               | M                        |                   |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height  $\pm 1^\circ$

With trailing arm L1=500 / L2=310, bag pressures acc. to TE-1188.0 sheet 5

With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 11

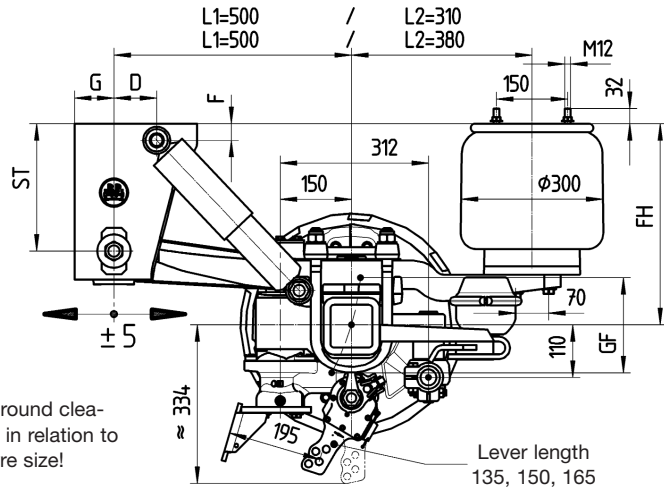
The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

# Airlight II

Self steering axles with drum brake SN 4218  
Series HSFHALOLL 9010 V30K/V30

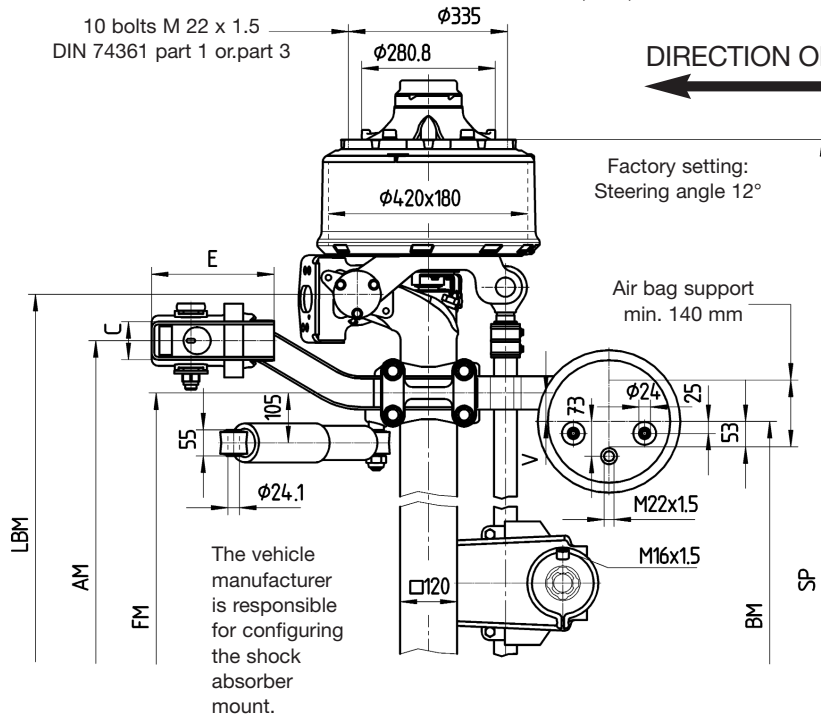
Ride height 430-510 mm  
for semi-trailer

AL II-SN.0  
Sheet-no. 3



10 bolts M 22 x 1.5  
DIN 74361 part 1 or part 3

DIRECTION OF TRAVEL



| Line | Series | ≈ adjustable ride height FH |                          |                   |                    | Total spring travel (GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    |
|------|--------|-----------------------------|--------------------------|-------------------|--------------------|---------------------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|
|      |        | for axle units              | min. FH with axle raised | Empty without air | Loaded without air |                                       |         |                         | ST             | C  | E   | G  | D                    | F  |
| 2    | ALOLL  | 430-470                     | 460                      | 360               | 345                | 190                                   | 30K     | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |
| 3    | ALOLL  | 460-510                     | 490                      | 390               | 375                | 220                                   | 30      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 |

<sup>1)</sup> Lifting heights acc. to TD-1242.0

<sup>2)</sup> M = for diaphragm cylinder / F = for spring brake cylinder

| Axle type      | Track SP | Spring centre FM | Hanger bracket centre AM | Steering pivot centre LBM | Air bag centre BM |      | Brake cyl. <sup>2)</sup> | Tyres recommended |
|----------------|----------|------------------|--------------------------|---------------------------|-------------------|------|--------------------------|-------------------|
|                |          |                  |                          |                           | V=20              | V=60 |                          |                   |
| HSFHALOLL 9010 | 2040     | 980              | 1200                     | 1395                      | 940               | 860  | M / F                    | 385/65 R 22.5     |
| HSFHALOLL 9010 | 2040     | 1080             | 1300                     | 1395                      | 1040              | 960  | M / F                    |                   |
| HSFHALOLL 9010 | 2095     | 1080             | 1300                     | 1450                      | 1040              | 960  | M / F                    | 385/55 R 22.5     |
| HSFHALOLL 9010 | 2140     | 1080             | 1300                     | 1495                      | 1040              | 960  | M / F                    |                   |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height ±1°

With trailing arm L1=500 / L2=310, bag pressures acc. to TE-1188.0 sheet 18

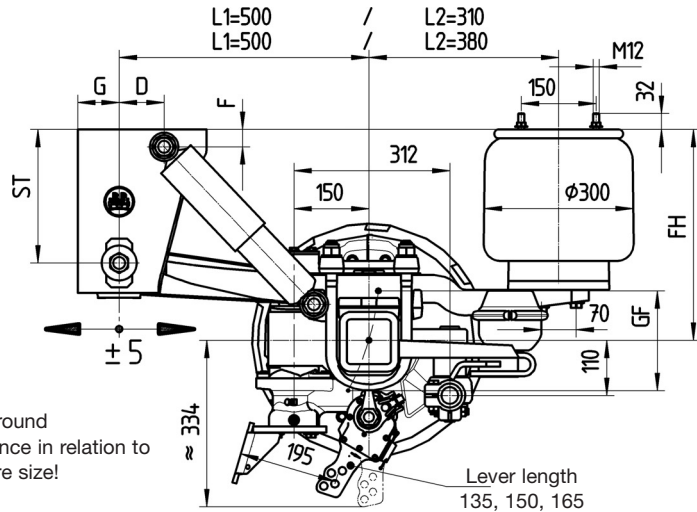
With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 15

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

With an axle load ratio - rigid axle to steering axle - of 1:1, in suspension units with a lifting axle and when using central lubrication systems, the steering axles must be equipped with a steering damper.

| Leaf spring |     | Steering tie rod position | Steering damper parts kit | Drawing      |
|-------------|-----|---------------------------|---------------------------|--------------|
| L1          | L2  |                           |                           |              |
| 500         | 380 | 312 / 110                 | 05.872.00.53.0            | 04.00.074453 |
|             | 310 |                           |                           |              |

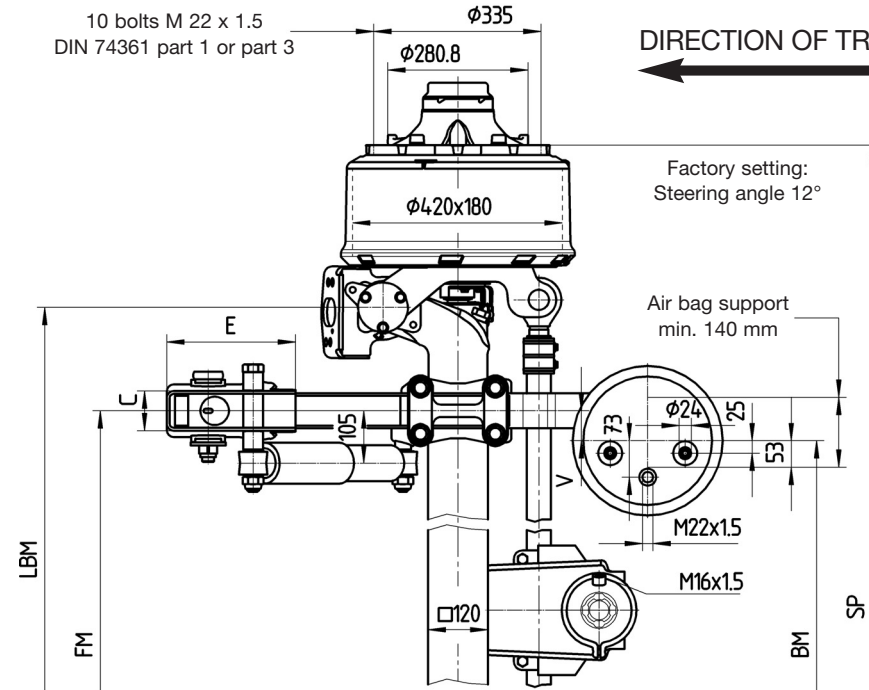




Note:  
The ground clearance in relation to the tyre size!

10 bolts M 22 x 1.5  
DIN 74361 part 1 or part 3

DIRECTION OF TRAVEL



| Line | Series | ≈ adjustable ride height FH |                          |                   |                    | Total spring travel GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    |
|------|--------|-----------------------------|--------------------------|-------------------|--------------------|--------------------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|
|      |        | for axle units              | min. FH with axle raised | Empty without air | Loaded without air |                                      |         |                         | ST             | C  | E   | G  | D                    | F  |
| 2    | ALOLL  | 430-470                     | 460                      | 360               | 345                | 190                                  | 30K     | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |
| 3    | ALOLL  | 460-510                     | 490                      | 390               | 375                | 220                                  | 30      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 |

<sup>1)</sup> Lifting heights acc. to TD-1242.0

<sup>2)</sup> M = for diaphragm cylinder / F = for spring brake cylinder

| Axle type      | Track SP | Spring centre FM | Steering pivot centre LBM | Air bag centre BM |      | Brake cyl. <sup>2)</sup> | Tyres recommended              |
|----------------|----------|------------------|---------------------------|-------------------|------|--------------------------|--------------------------------|
|                |          |                  |                           | V=20              | V=60 |                          |                                |
| HSFHALOLL 9010 | 2040     | 980              | 1395                      | 940               | 860  | M / F                    | 385/65 R 22.5<br>385/55 R 22.5 |
| HSFHALOLL 9010 | 2040     | 1080             | 1395                      | 1040              | 960  | M / F                    |                                |
| HSFHALOLL 9010 | 2095     | 1080             | 1450                      | 1040              | 960  | M / F                    |                                |
| HSFHALOLL 9010 | 2140     | 1080             | 1495                      | 1040              | 960  | M / F                    |                                |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height ±1°

With trailing arm L1=500 / L2=310, bag pressures acc. to TE-1188.0 sheet 18

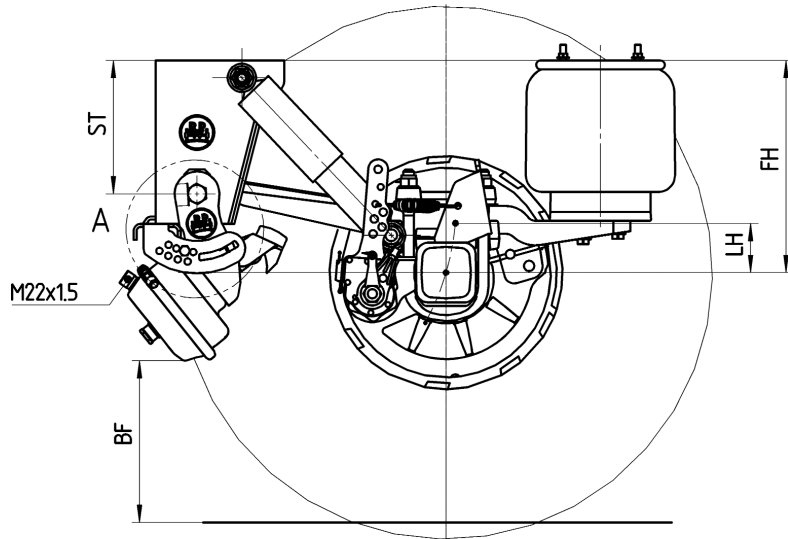
With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 15

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

With an axle load ratio - rigid axle to steering axle - of 1:1, in suspension units with a lifting axle and when using lubrication systems, the steering axle must be equipped with a steering damper.

| Leaf spring |     | Steering tie rod position | Steering damper parts kit | Drawing      |
|-------------|-----|---------------------------|---------------------------|--------------|
| L1          | L2  |                           |                           |              |
| 500         | 380 | 312 / 110                 | 05.872.00.53.0            | 04.00.074453 |
|             | 310 |                           |                           |              |





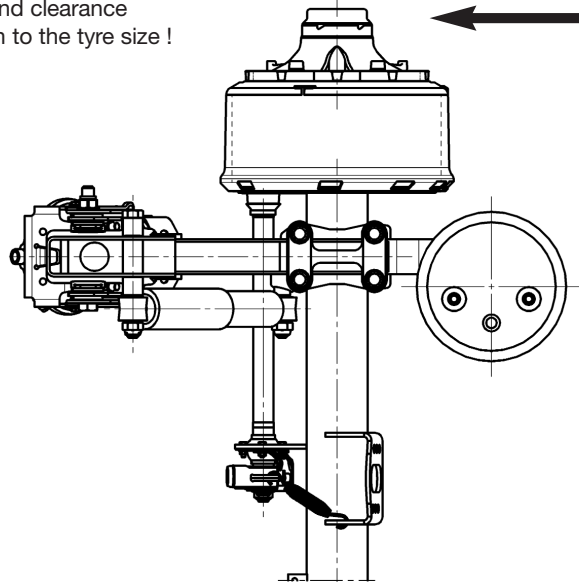
| Suspensions to drawing ALII-SN.0 Sheet-no. | ≈ adjustable ride height FH |                          | min. lifting stroke LH | Support height ST | Ground clearance BF <sup>1)</sup> | Position Lift Stop No. |
|--|-----------------------------|--------------------------|------------------------|-------------------|-----------------------------------|------------------------|
|  | for axle units              | min. FH with axle raised |                        |                   |                                   |                        |
| Sheet 1                                    | 400-430                     | 430                      | 100                    | 184               | 419                               | 8                      |
|  | 430-470                     | 460                      | 100                    | 268               | 358                               | 7                      |
| Sheet 2                                    | 460-510                     | 490                      | 100                    | 268               | 395                               | 8                      |

<sup>1)</sup> Ground clearance in relation to the set minimum ride height with the axle raised.

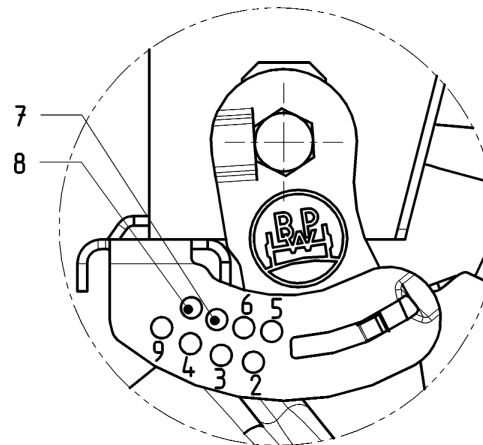
\* Tyre: 385/65 R 22.5 ( $r_{stat} = 496$ )

\*Note:  
The ground clearance in relation to the tyre size !

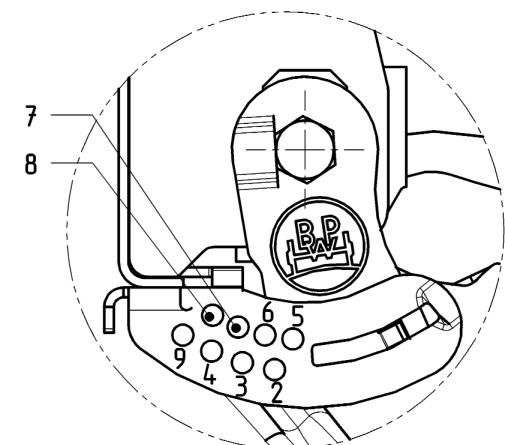
DIRECTION OF TRAVEL



Detail A  
Support configuration



Detail A  
Channel cross member configuration



In the lifting and lowering version, the total spring travel must be limited by a shut-off valve.

Minimum air pressure for lifting the axle approx. 6 bar.

The hanger brackets, air bag supports and the frame must be strengthened so that they can adsorb the forces applied. See the current BPW installation instructions.

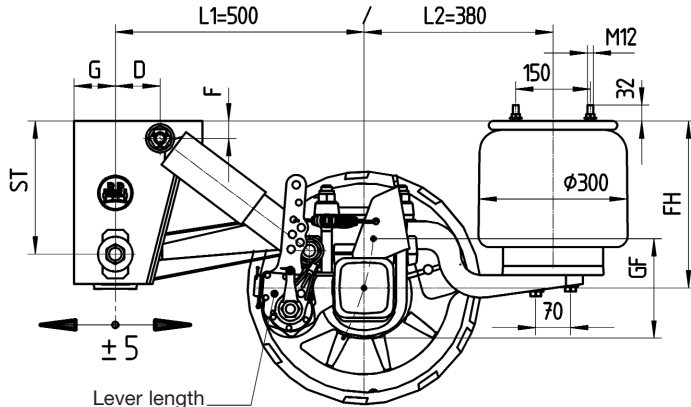


# Airlight II

Air-spring axles with drum brake SN 4218  
Series HSFALM(T) 9010 V30K/V30 HZFALM(T) 9010 V30K/V30

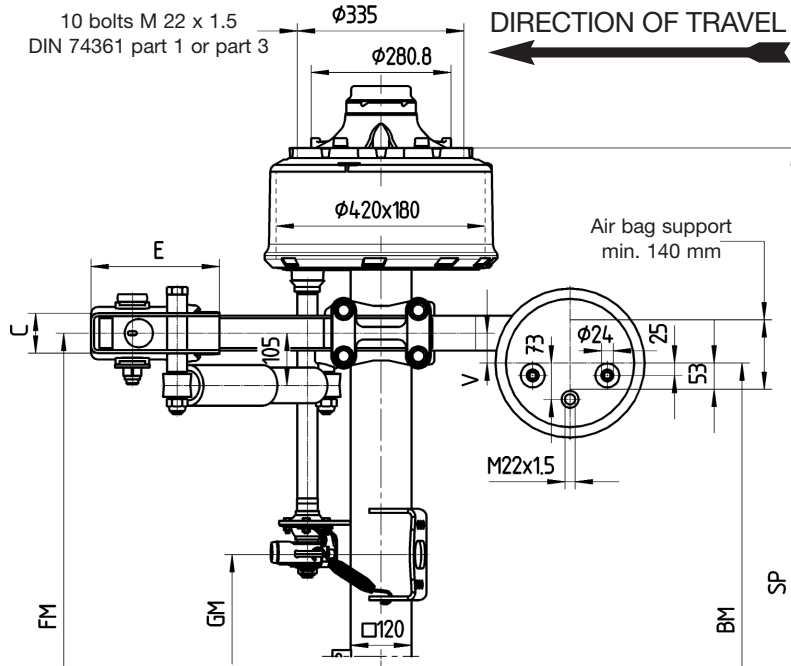
Ride height 245-420 mm  
for trailers and semi-trailers

**AL II-SN.0**  
Sheet-no. 8



Lever length  
120,135,150,165

10 bolts M 22 x 1.5  
DIN 74361 part 1 or part 3



| Line | Series | ~ adjustable ride height FH |                |                          |                   |                    | Total spring travel (GF <sup>1)</sup> ) | Air bag | Shock absorber 02.37... | Hanger bracket |     |    |     | Shock absorber mount |    |    |
|------|--------|-----------------------------|----------------|--------------------------|-------------------|--------------------|---|---------|-------------------------|----------------|-----|----|-----|----------------------|----|----|
|      |        | For single axles            | For axle units | min. FH with axle raised | Empty without air | Loaded without air |   |         |                         | ST             | C   | E  | G   | D                    | F  |    |
| 2)   | 1      | ALMT                        | 245-290        | 255-290                  | 285               | 185                | 170                                     | 190     | 30K                     | ..02.70.00     | 184 | 86 | 240 | 83                   | 70 | 35 |
| 2)   | 2      | ALMT                        | 270-310        | 280-310                  | 310               | 210                | 195                                     | 220     | 30                      | ..02.70.00     | 184 | 86 | 240 | 83                   | 70 | 35 |
|      | 3      | ALMT                        | 280-325        | 290-325                  | 320               | 220                | 205                                     | 190     | 30K                     | ..22.83.00     | 268 | 80 | 258 | 83                   | 55 | 35 |
| 2)   | 4      | ALM                         | 300-340        | 310-340                  | 340               | 240                | 225                                     | 190     | 30K                     | ..22.83.00     | 184 | 86 | 240 | 83                   | 70 | 35 |
|      | 5      | ALMT                        | 305-360        | 315-360                  | 345               | 245                | 230                                     | 220     | 30                      | ..22.83.00     | 268 | 80 | 258 | 83                   | 55 | 35 |
|      | 6      | ALM                         | 340-390        | 350-390                  | 380               | 280                | 265                                     | 190     | 30K                     | ..22.83.00     | 268 | 80 | 258 | 83                   | 90 | 35 |
|      | 7      | ALM                         | 365-420        | 375-420                  | 405               | 305                | 290                                     | 220     | 30                      | ..22.83.00     | 268 | 80 | 258 | 83                   | 90 | 35 |

<sup>1)</sup> Lifting heights acc. to TD-1242.0

<sup>2)</sup> Only suitable for semi-trailers / Centre axle drawbar trailer

<sup>3)</sup> M = for diaphragm cylinder / F = for spring brake cylinder

<sup>4)</sup> at V=60 only diaphragm cylinder

| Axle type   | Track SP | Spring centre FM | Air cylinder centre GM | Air bag centre BM |      | Brake cyl. <sup>3)</sup> | Tyres recommended |
|-------------|----------|------------------|------------------------|-------------------|------|--------------------------|-------------------|
|             |          |                  |                        | V=20              | V=60 |                          |                   |
| HSF... 9010 | 2010     | 1200             | 379                    | 1160              | 1080 | M / F                    | 385/65 R 22.5     |
| HSF... 9010 | 2040     | 1200             | 409                    | 1160              | 1080 | M / F                    |                   |
| HSF... 9010 | 2040     | 1300             | 409                    | 1260              | 1180 | M / F                    |                   |
| HSF... 9010 | 2040     | 1300             | 671                    | 1260              | 1180 | M / (F) <sup>4)</sup>    |                   |
| HSF... 9010 | 2095     | 1300             | 464                    | 1260              | 1180 | M / F                    | 385/55 R 22.5     |
| HSF... 9010 | 2095     | 1400             | 464                    | ---               | 1280 | M / F                    |                   |
| HSF... 9010 | 2140     | 1400             | 585                    | 1360              | 1280 | M / F                    | 275/70 R 22.5     |
| HZF... 9010 | 1820     | 900              | 239                    | 860               | 780  | M / (F) <sup>4)</sup>    |                   |
| HZF... 9010 | 1820     | 980              | 239                    | ---               | 860  | M / F                    |                   |
| HZF... 9010 | 1880     | 980              | 259                    | 940               | 860  | M / F                    |                   |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height  $\pm 1^\circ$

With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 15

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.



# Airlight II

Air-spring axle with drum brake SN 4218

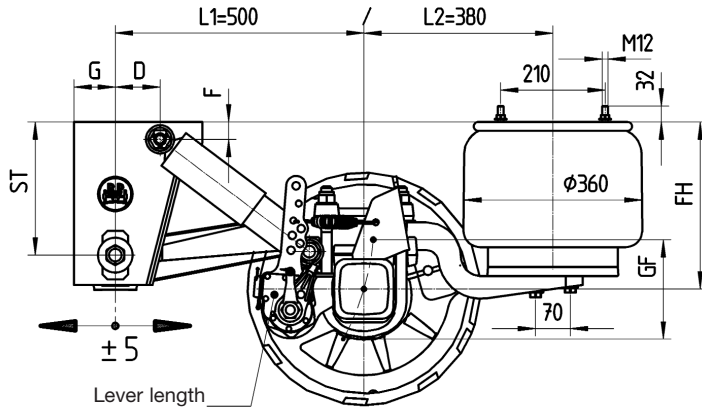
Series HSFALM(T) 9010 V36K/V36 HZFALM(T) 9010 V36K/V36

Ride height 245-420 mm

for trailer and semi-trailer

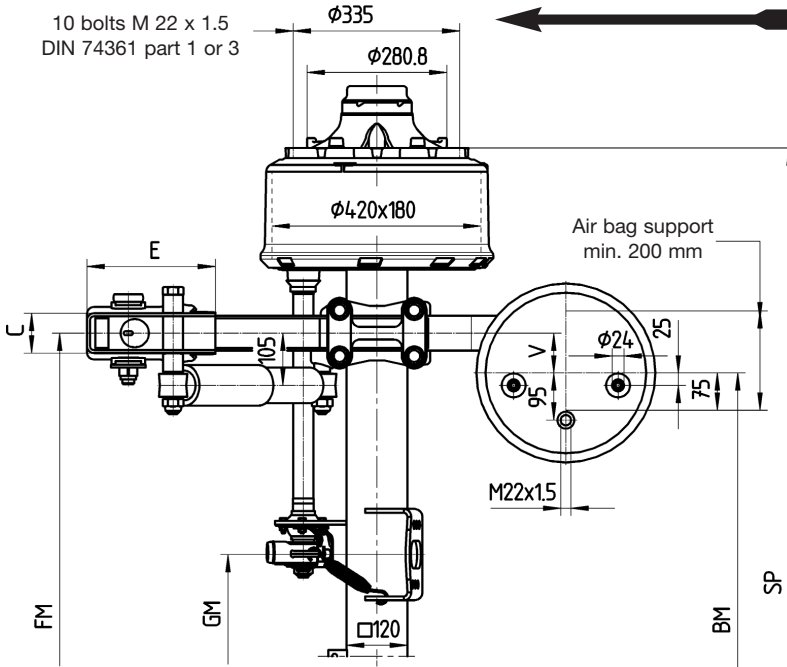
# AL II-SN.0

Sheet-no. 9



DIRECTION OF TRAVEL

10 bolts M 22 x 1.5  
DIN 74361 part 1 or 3



| Line | Series | ~ adjustable ride height FH |                |                          |                   |                    | Total spring travel (GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |     |    |     | Shock absorber mount |    |    |
|------|--------|-----------------------------|----------------|--------------------------|-------------------|--------------------|---------------------------------------|---------|-------------------------|----------------|-----|----|-----|----------------------|----|----|
|      |        | for single axles            | for axle units | min. FH with axle raised | Empty without air | Loaded without air |                                       |         |                         | ST             | C   | E  | G   | D                    | F  |    |
| 2)   | 1      | ALMT                        | 245-290        | 255-290                  | 285               | 185                | 170                                   | 190     | 36K                     | ..02.70.00     | 184 | 86 | 240 | 83                   | 70 | 35 |
| 2)   | 2      | ALMT                        | 270-310        | 280-310                  | 310               | 210                | 195                                   | 220     | 36                      | ..02.70.00     | 184 | 86 | 240 | 83                   | 70 | 35 |
|      | 3      | ALMT                        | 280-325        | 290-325                  | 320               | 220                | 205                                   | 190     | 36K                     | ..22.83.00     | 268 | 80 | 258 | 83                   | 55 | 35 |
| 2)   | 4      | ALM                         | 300-340        | 310-340                  | 340               | 240                | 225                                   | 190     | 36K                     | ..22.83.00     | 184 | 86 | 240 | 83                   | 70 | 35 |
|      | 5      | ALMT                        | 305-360        | 315-360                  | 345               | 245                | 230                                   | 220     | 36                      | ..22.83.00     | 268 | 80 | 258 | 83                   | 55 | 35 |
|      | 6      | ALM                         | 340-390        | 350-390                  | 380               | 280                | 265                                   | 190     | 36K                     | ..22.83.00     | 268 | 80 | 258 | 83                   | 90 | 35 |
|      | 7      | ALM                         | 365-420        | 375-420                  | 405               | 305                | 290                                   | 220     | 36                      | ..22.83.00     | 268 | 80 | 258 | 83                   | 90 | 35 |

<sup>1)</sup> Lifting heights acc. to TD-1242.0

<sup>2)</sup> Only suitable for semi-trailers / Centre axle drawbar trailer

<sup>3)</sup> M = for diaphragm cylinder / F = for spring brake cylinder

| Axle type   | Track SP | Spring centre FM | Air cylinder centre GM | Air bag centre BM | Brake cyl. <sup>3)</sup> | Tyres recommended |
|-------------|----------|------------------|------------------------|-------------------|--------------------------|-------------------|
|             |          |                  |                        | V=80              |                          |                   |
| HSF... 9010 | 2010     | 1200             | 379                    | 1040              | M / F                    | 385/65 R 22.5     |
| HSF... 9010 | 2040     | 1200             | 409                    | 1040              | M / F                    |                   |
| HSF... 9010 | 2040     | 1300             | 409                    | 1140              | M / F                    |                   |
| HSF... 9010 | 2095     | 1300             | 464                    | 1140              | M / F                    | 385/55 R 22.5     |
| HSF... 9010 | 2140     | 1400             | 585                    | 1240              | M / F                    |                   |
| HZF... 9010 | 1820     | 900              | 239                    | 740               | M                        | 275/70 R 22.5     |
| HZF... 9010 | 1820     | 980              | 239                    | 820               | M                        |                   |
| HZF... 9010 | 1880     | 980              | 259                    | 820               | M                        |                   |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height  $\pm 1^\circ$

With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 11

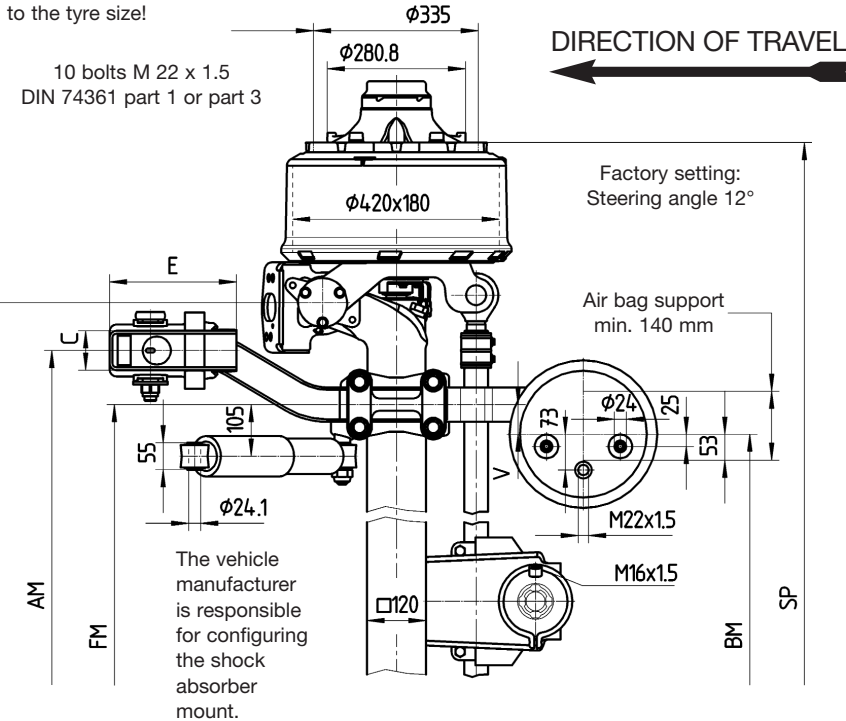
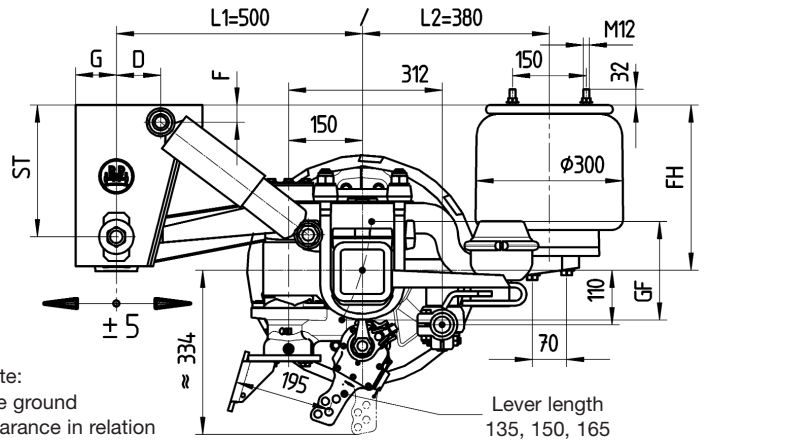
The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

# Airlight II

Self-steering axles with drum brake SN 4218  
Series HSFHALM(T)LL 9010 V30K/V30

Ride height 255-420 mm  
for semi-trailer

**AL II-SN.0**  
Sheet-no. 10



| Line | Serie  | ≈ adjustable ride height FH |                          |                   |                    | Total spring travel GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    |
|------|--------|-----------------------------|--------------------------|-------------------|--------------------|--------------------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|
|      |        | for axle units              | min. FH with axle raised | Empty without air | Loaded without air |                                      |         |                         | ST             | C  | E   | G  | D                    | F  |
| 1    | ALMTLL | 255-290                     | 285                      | 185               | 170                | 190                                  | 30K     | ..02.70.00              | 184            | 86 | 240 | 83 | 70                   | 35 |
| 2    | ALMTLL | 280-310                     | 310                      | 210               | 195                | 220                                  | 30      | ..02.70.00              | 184            | 86 | 240 | 83 | 70                   | 35 |
| 5    | ALMTLL | 315-360                     | 345                      | 245               | 230                | 220                                  | 30      | ..22.83.00              | 268            | 80 | 258 | 83 | 55                   | 35 |
| 6    | ALMLL  | 350-390                     | 380                      | 280               | 265                | 190                                  | 30K     | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |
| 7    | ALMLL  | 375-420                     | 405                      | 305               | 290                | 220                                  | 30      | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |

<sup>1)</sup> Lifting heights acc. to TD-1242.0

<sup>2)</sup> M = for diaphragm cylinder / F = for spring brake cylinder

| Axle type      | Track SP | Spring centre FM | Hanger bracket centre AM | Steering pivot centre LBM | Air bag centre BM |      | Brake cyl. <sup>2)</sup> | Tyres recommended |
|----------------|----------|------------------|--------------------------|---------------------------|-------------------|------|--------------------------|-------------------|
|                |          |                  |                          |                           | V=20              | V=60 |                          |                   |
| HSFHALMLL 9010 | 2040     | 980              | 1200                     | 1395                      | 940               | 860  | M / F                    | 385/65 R 22.5     |
| HSFHALMLL 9010 | 2040     | 1080             | 1300                     | 1395                      | 1040              | 960  | M / F                    |                   |
| HSFHALMLL 9010 | 2095     | 1080             | 1300                     | 1450                      | 1040              | 960  | M / F                    | 385/55 R 22.5     |
| HSFHALMLL 9010 | 2140     | 1080             | 1300                     | 1495                      | 1040              | 960  | M / F                    |                   |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height ±1°

With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 15

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

With an axle load ratio - rigid axle to steering axle - of 1:1, in suspension units with a lifting axle and when using central lubrication systems, the steering axle must be equipped with a steering damper.

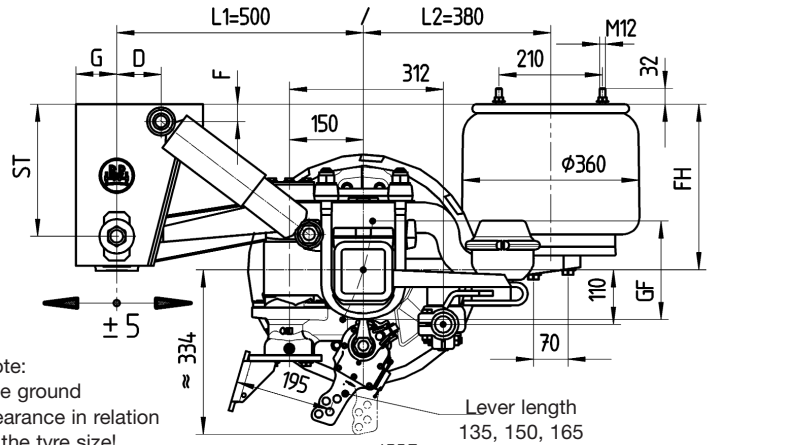
| Leaf spring |     | Steering tie rod position | Steering damper parts kit | Drawing      |
|-------------|-----|---------------------------|---------------------------|--------------|
| L1          | L2  |                           |                           |              |
| 500         | 380 | 312 / 110                 | 05.872.00.53.0            | 04.00.074453 |

# Airlight II

Self-steering axles with drum brake SN 4218  
Series HSFHALMLL 9010 V36K/V36

Ride height 350-420 mm  
for semi-trailer

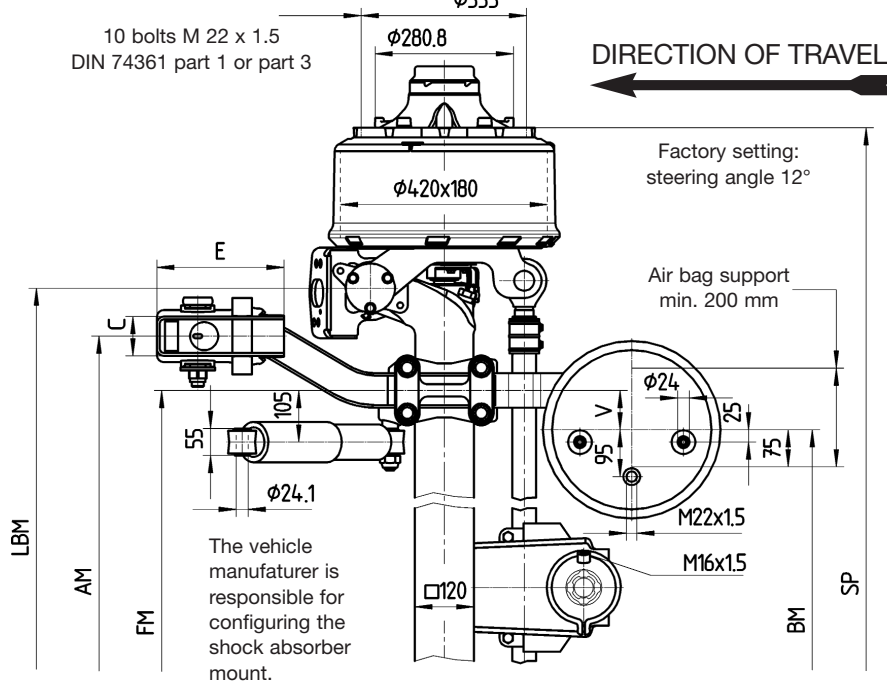
AL II-SN.0  
Sheet-no. 11



Note:  
The ground clearance in relation to the tyre size!

10 bolts M 22 x 1.5  
DIN 74361 part 1 or part 3

DIRECTION OF TRAVEL



The vehicle manufacturer is responsible for configuring the shock absorber mount.

| Line | Series <sup>2)</sup> | ≈ adjustable ride height FH |                          |                   |                    | Total spring travel (GF <sup>1)</sup> ) | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    |
|------|----------------------|-----------------------------|--------------------------|-------------------|--------------------|---|---------|-------------------------|----------------|----|-----|----|----------------------|----|
|      |                      | for axle units              | min. FH with axle raised | Empty without air | Loaded without air |   |         |                         | ST             | C  | E   | G  | D                    | F  |
|      |                      |                             |                          |                   |                    |   |         |                         |                |    |     |    |                      |    |
| 6    | ALMLL                | 350-390                     | 380                      | 280               | 265                | 190                                     | 36K     | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |
| 7    | ALMLL                | 375-420                     | 405                      | 305               | 290                | 220                                     | 36      | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |

<sup>1)</sup> Lifting heights acc. to TD-1242.0

<sup>2)</sup> ALMTLL series not possible with air bags 36/36K, version only acc. to sheet no. 10

<sup>3)</sup> M = for diaphragm cylinder / F = for spring brake cylinder

| Axle type      | Track SP | Federmitte FM | Hanger bracket centre AM | Steering pivot centre LBM | Air bag centre BM | Brake cyl. <sup>3)</sup> | Tyres recommended |
|----------------|----------|---------------|--------------------------|---------------------------|-------------------|--------------------------|-------------------|
|                |          |               |                          |                           | V=80              |                          |                   |
| HSFHALMLL 9010 | 2040     | 980           | 1200                     | 1395                      | 820               | M / F                    | 385/65 R 22.5     |
| HSFHALMLL 9010 | 2040     | 1080          | 1300                     | 1395                      | 920               | M / F                    |                   |
| HSFHALMLL 9010 | 2095     | 1080          | 1300                     | 1450                      | 920               | M / F                    | 385/55 R 22.5     |
| HSFHALMLL 9010 | 2140     | 1080          | 1300                     | 1495                      | 920               | M / F                    |                   |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height ±1°

With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 11

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

With an axle load ratio - rigid axle to steering axle - of 1:1, in suspension units with a lifting axle and when using central lubrication systems, the steering axle must be equipped with a steering damper.

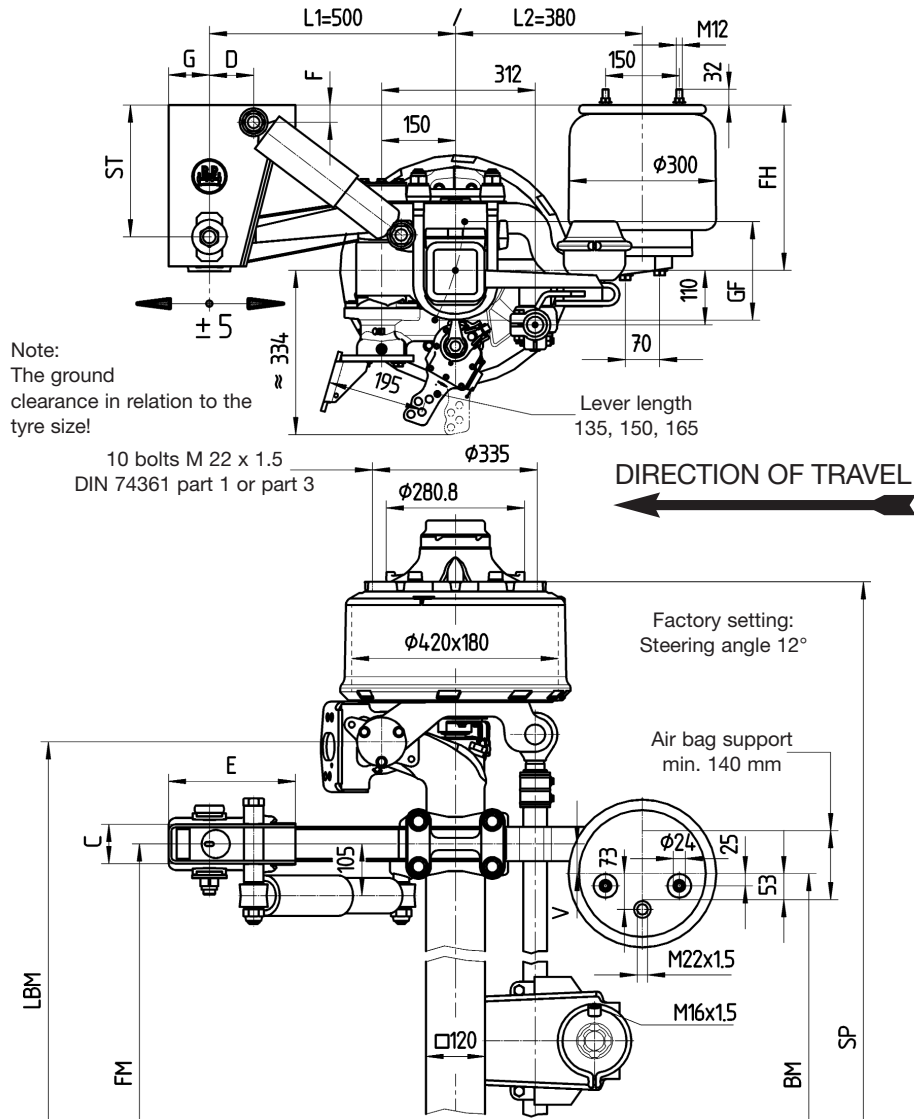
| Leaf spring |     | Steering tie rod position | Steering damper parts kit | Drawing      |
|-------------|-----|---------------------------|---------------------------|--------------|
| L1          | L2  |                           |                           |              |
| 500         | 380 | 312 / 110                 | 05.872.00.53.0            | 04.00.074453 |

# Airlight II

Self-steering axles with drum brake SN 4218  
Series HSFHALMLL 9010 V30K/V30

Ride height 350-420 mm  
for semi-trailer

AL II-SN.0  
Sheet-no. 12



| Line | Series 2) | ≈ adjustable ride height FH |                          |                   |                    | Total spring travel (GF 1) | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    |
|------|-----------|-----------------------------|--------------------------|-------------------|--------------------|----------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|
|      |           | for axle units              | min. FH with axle raised | Empty without air | Loaded without air |                            |         |                         | ST             | C  | E   | G  | D                    | F  |
| 6    | ALMLL     | 350-390                     | 380                      | 280               | 265                | 190                        | 30K     | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |
| 7    | ALMLL     | 375-420                     | 405                      | 305               | 290                | 220                        | 30      | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |

1) Lifting heights acc. to TD-1242.0

2) ALMTLL series not possible, version only acc. to sheet no.10

3) M = for diaphragm cylinder / F = for spring brake cylinder

| Axle type      | Track SP | Spring centre FM | Steering pivot centre LBM | Air bag centre BM |      | Brake cyl. 3) | Tyres recommended |
|----------------|----------|------------------|---------------------------|-------------------|------|---------------|-------------------|
|                |          |                  |                           | V=20              | V=60 |               |                   |
| HSFHALMLL 9010 | 2040     | 980              | 1395                      | 940               | 860  | M / F         | 385/65 R 22.5     |
| HSFHALMLL 9010 | 2040     | 1080             | 1395                      | 1040              | 960  | M / F         |                   |
| HSFHALMLL 9010 | 2095     | 1080             | 1450                      | 1040              | 960  | M / F         | 385/55 R 22.5     |
| HSFHALMLL 9010 | 2140     | 1080             | 1495                      | 1040              | 960  | M / F         |                   |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height  $\pm 1^\circ$

With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 15

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

With an axle load ratio - rigid axle to steering axle - of 1:1, in suspension units with a lifting axle and when using central lubrication systems, the steering axle must be equipped with a steering damper.

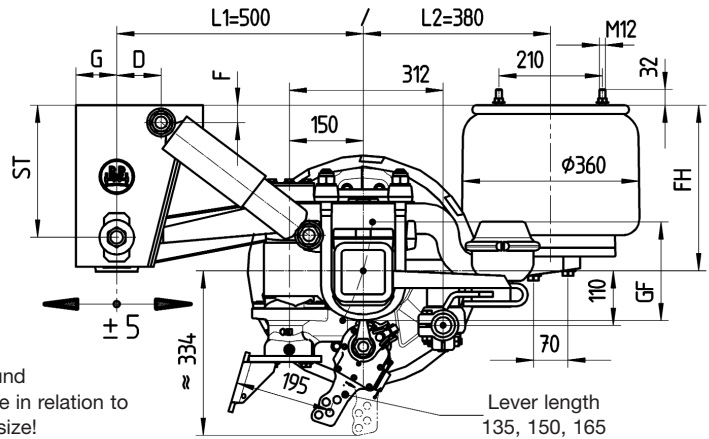
| Leaf spring |     | Steering tie rod position | Steering damper parts kit | Drawing      |
|-------------|-----|---------------------------|---------------------------|--------------|
| L1          | L2  |                           |                           |              |
| 500         | 380 | 312 / 110                 | 05.872.00.53.0            | 04.00.074453 |

# Airlight II

Self-steering axles with drum brake SN 4218  
Series HSFHALMLL 9010 V36K/V36

Ride height 350-420 mm  
for semi-trailer

AL II-SN.0  
Sheet-no. 13



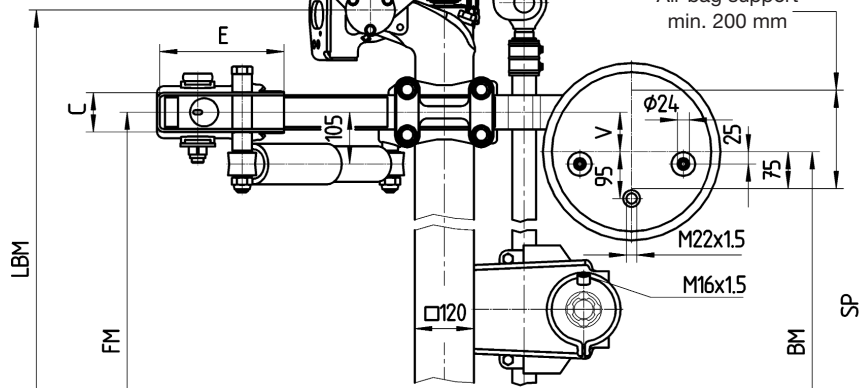
Note:  
The ground clearance in relation to the tyre size!

10 bolts M 22 x 1.5  
DIN 74361 part 1 or part 3

DIRECTION OF TRAVEL

Factory setting:  
Steering angle 12°

Air bag support  
min. 200 mm



| Line | Series 2) | ≈ adjustable ride height FH |                          |                   |                    | Total spring travel GF 1) | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    |
|------|-----------|-----------------------------|--------------------------|-------------------|--------------------|---------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|
|      |           | for axle units              | min. FH with axle raised | Empty without air | Loaded without air |                           |         |                         | ST             | C  | E   | G  | D                    | F  |
| 6    | ALMLL     | 350-390                     | 380                      | 280               | 265                | 190                       | 36K     | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |
| 7    | ALMLL     | 375-420                     | 405                      | 305               | 290                | 220                       | 36      | ..22.83.00              | 268            | 80 | 258 | 83 | 90                   | 35 |

1) Lifting heights acc. to TD-1242.0

2) ALMTLL series not possible, version only acc. sheet no. 10

3) M = for diaphragm cylinder / F = for spring brake cylinder

| Axle type      | Track SP | Spring centre FM | Steering pivot centre LBM | Air bag centre BM | Brake cyl. 3) | Tyres recommended |
|----------------|----------|------------------|---------------------------|-------------------|---------------|-------------------|
|                |          |                  |                           | V=80              |               |                   |
| HSFHALMLL 9010 | 2040     | 980              | 1395                      | 820               | M / F         | 385/65 R 22.5     |
| HSFHALMLL 9010 | 2040     | 1080             | 1395                      | 920               | M / F         |                   |
| HSFHALMLL 9010 | 2095     | 1080             | 1450                      | 920               | M / F         | 385/55 R 22.5     |
| HSFHALMLL 9010 | 2140     | 1080             | 1495                      | 920               | M / F         |                   |

max. inclination angle of the semitrailer under full load and lowest adjustable ride height ±1°

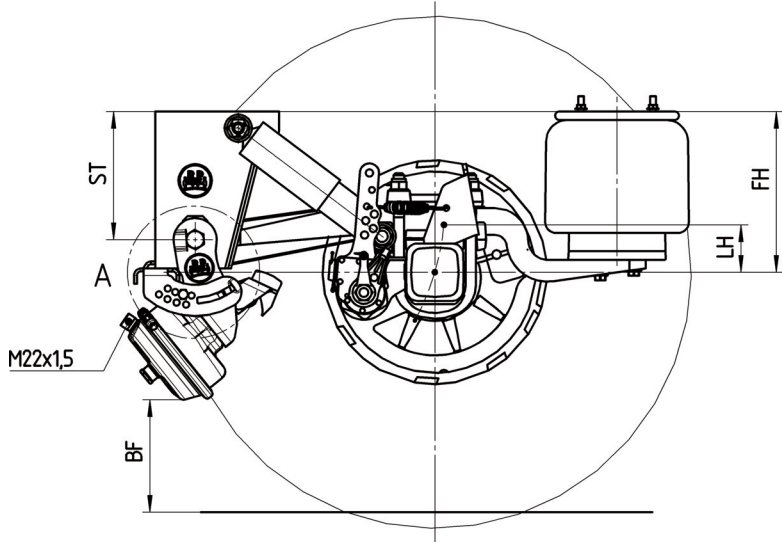
With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 11

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

With an axle load ratio - rigid axle to steering axle - of 1:1, in suspension units with a lifting axle and when using central lubrication systems, the steering axle must be equipped with a steering damper.

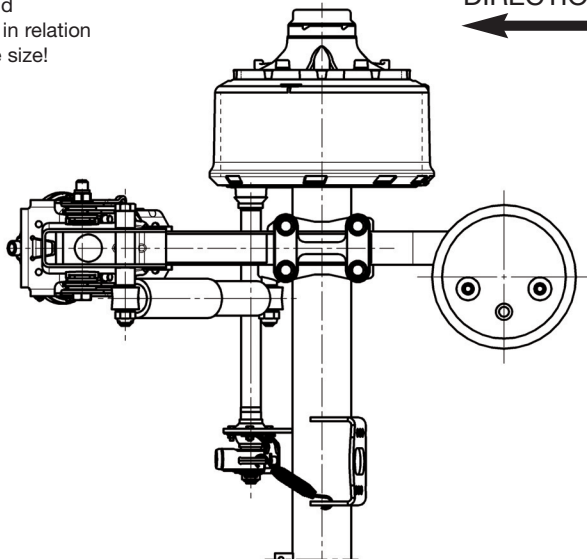
| Leaf spring |     | Steering tie rod position | Steering damper parts kit | Drawing      |
|-------------|-----|---------------------------|---------------------------|--------------|
| L1          | L2  |                           |                           |              |
| 500         | 380 | 312 / 110                 | 05.872.00.53.0            | 04.00.074453 |





\* Note:  
The ground clearance in relation to the tyre size!

DIRECTION OF TRAVEL

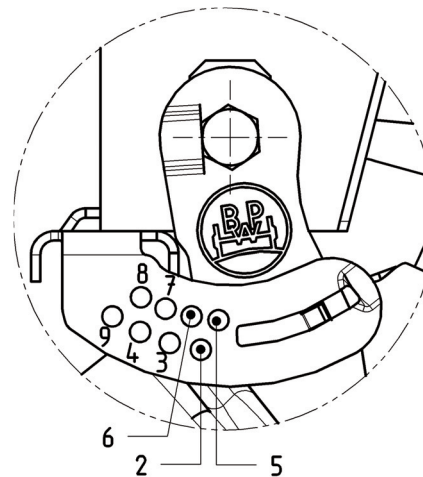


| Suspensions to drawing ALII-SN.0 Sheet-No. | » adjustable ride height FH |                          | min. Lifting stroke LH | support-height ST | Ground clearance BF <sup>1)</sup> | Position Lift stop No. |
|--|-----------------------------|--------------------------|------------------------|-------------------|-----------------------------------|------------------------|
|  | for axle units              | min. FH with axle raised |                        |                   |                                   |                        |
| Sheet 8                                    | 255-290                     | 285                      | 100                    | 184               | 262                               | 5                      |
|  | 280-310                     | 310                      | 100                    | 184               | 287                               | 6                      |
|  | 290-325                     | 320                      | 100                    | 268               | 213                               | 5                      |
| Sheet 9                                    | 310-340                     | 340                      | 100                    | 184               | 316                               | 6                      |
|  | 315-360                     | 345                      | 100                    | 268               | 238                               | 5                      |
|  | 350-390                     | 380                      | 100                    | 268               | 271                               | 2                      |
|  | 375-420                     | 405                      | 100                    | 268               | 297                               | 6                      |

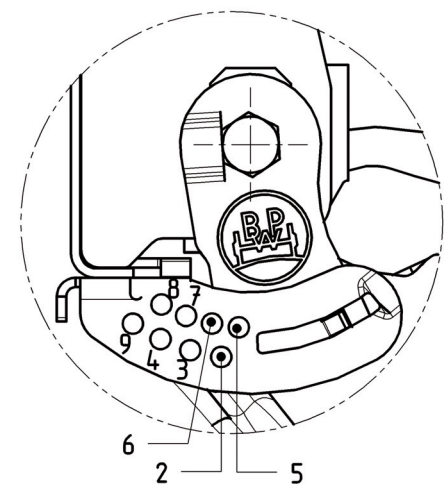
<sup>1)</sup> Ground clearance in relation to the set minimum ride height with the axle raised.

\* Tyre: 385/65 R 22.5 ( $r_{stat} = 496$ )

Detail A Support configuration



Detail A Channel cross member configuration



In the lifting and lowering version, the total spring travel must be limited by a shut-off valve.

Minimum air pressure for lifting the axle approx. 6 bar.

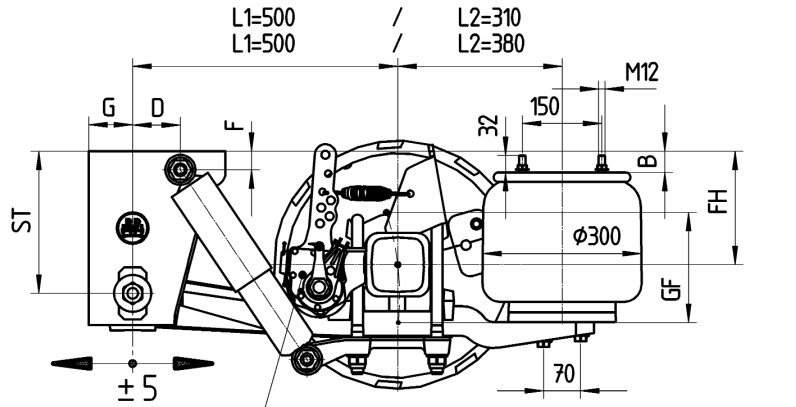
The hanger brackets, air bag supports and the frame must be strengthened so that they can adsorb the forces applied. See the current BPW installation instructions.

# Airlight II

Air-spring axles with drum brake SN 4218  
Series HSFALU 9010 V30K/V30 HZFALU 9010 V30K/V30

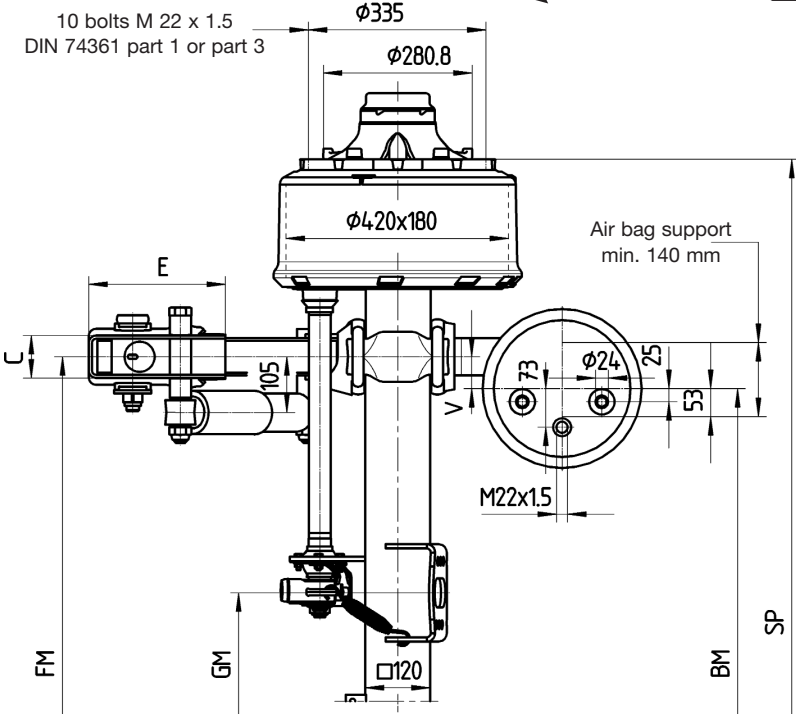
Ride height 175-300 mm  
for trailers and semi-trailers

**AL II-SN.0**  
Sheet-no. 15



Lever length  
120,135,150,165

DIRECTION OF TRAVEL



| Line | Series | ≈ adjustable ride height FH |                |                          |                   |                    | Total spring travel GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    | Con-sole <sup>3)</sup> |
|------|--------|-----------------------------|----------------|--------------------------|-------------------|--------------------|--------------------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|------------------------|
|      |        | For single axles            | For axle units | min. FH with axle raised | Empty without air | Loaded without air |                                      |         |                         | ST             | C  | E   | G  | D                    | F  |                        |
| 1    | ALU    | 175-215                     | 185-215        | 215                      | 115               | 100                | 190                                  | 30K     | ..22.83.00              | 184            | 86 | 240 | 83 | 70                   | 35 | --                     |
| 2    | ALU    | 205-255                     | 215-255        | 245                      | 145               | 130                | 190                                  | 30K     | ..02.92.00              | 268            | 80 | 258 | 83 | 55                   | 35 | --                     |
| 3    | ALU    | 235-290                     | 245-290        | 275                      | 175               | 160                | 220                                  | 30      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | --                     |
| 4    | ALU    | 260-300                     | 270-300        | 300                      | 200               | 185                | 220                                  | 30      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | 40                     |

- 1) Lifting heights acc. to TD-1242.0
- 2) Only suitable for semi-trailers / Centre axle drawbar trailer
- 3) The console is not included in supplied package
- 4) M = for diaphragm cylinder / F = for spring brake cylinder
- 5) at V=60 only diaphragm cylinder
- 6) V=20 only with trailer L1=500 / L2=380

| Axle type   | Track SP | Spring centre FM | Air cylinder centre GM | Air bag centre BM  |      | Brake cyl. <sup>4)</sup> | Tyres recommended              |
|-------------|----------|------------------|------------------------|--------------------|------|--------------------------|--------------------------------|
|             |          |                  |                        | V=20               | V=60 |                          |                                |
| HSFALU 9010 | 2010     | 1200             | 379                    | 1160               | 1080 | M / F                    | 385/65 R 22.5<br>385/55 R 22.5 |
| HSFALU 9010 | 2040     | 1200             | 409                    | 1160               | 1080 | M / F                    |                                |
| HSFALU 9010 | 2040     | 1300             | 409                    | 1260 <sup>6)</sup> | 1180 | M / F                    |                                |
| HSFALU 9010 | 2040     | 1300             | 671                    | 1260 <sup>6)</sup> | 1180 | M / (F) <sup>5)</sup>    |                                |
| HSFALU 9010 | 2095     | 1300             | 464                    | 1260               | 1180 | M / F                    |                                |
| HSFALU 9010 | 2140     | 1400             | 585                    | 1360 <sup>6)</sup> | 1280 | M / F                    | 275/70 R 22.5                  |
| HZFALU 9010 | 1820     | 980              | 239                    | ---                | 860  | M / F                    |                                |
| HZFALU 9010 | 1880     | 980              | 259                    | 940                | 860  | M / F                    |                                |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height  $\pm 1^\circ$   
 With trailing arm L1=500 / L2=310, bag pressures acc. to TE-1188.0 sheet 18  
 With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 15  
 The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

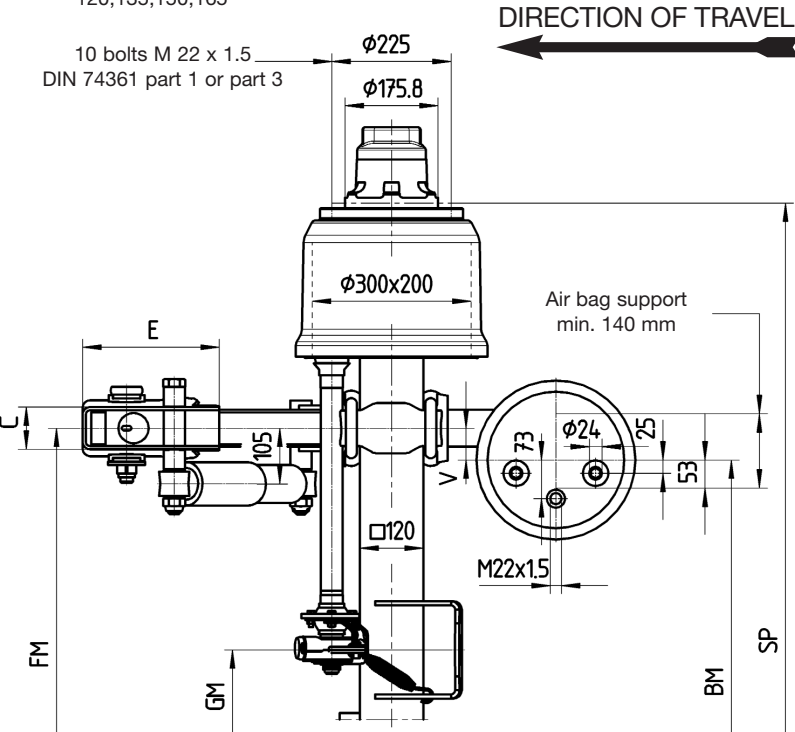
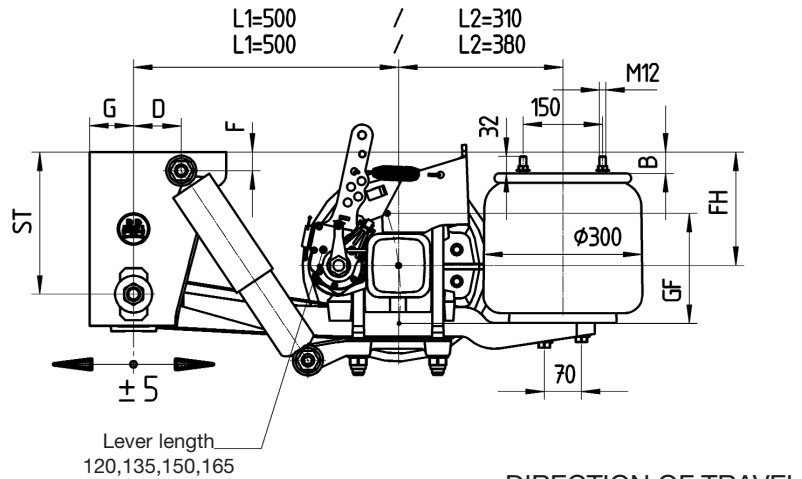


# Airlight II

Air-spring axles with drum brake SN 3020  
Series NHZFALU 9010 V30K/V30

Ride height 175-300 mm  
for trailers and semi-trailers

AL II-SN.0  
Sheet-no. 15a



| Line | Series | ≈ adjustable ride height FH |                |                          |                   |                    | Total spring travel GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |     |    |     | Shock absorber mount |    | Con-sole <sup>3)</sup><br>B |    |
|------|--------|-----------------------------|----------------|--------------------------|-------------------|--------------------|--------------------------------------|---------|-------------------------|----------------|-----|----|-----|----------------------|----|-----------------------------|----|
|      |        | For single axles            | For axle units | min. FH with axle raised | Empty without air | Loaded without air |                                      |         |                         | ST             | C   | E  | G   | D                    | F  |                             |    |
| 2)   | 1      | ALU                         | 175-215        | 185-215                  | 215               | 115                | 100                                  | 190     | 30K                     | ..22.83.00     | 184 | 86 | 240 | 83                   | 70 | 35                          | -- |
|      | 2      | ALU                         | 205-255        | 215-255                  | 245               | 145                | 130                                  | 190     | 30K                     | ..02.92.00     | 268 | 80 | 258 | 83                   | 90 | 35                          | -- |
|      | 3      | ALU                         | 235-290        | 245-290                  | 275               | 175                | 160                                  | 220     | 30                      | ..02.92.00     | 268 | 80 | 258 | 83                   | 90 | 35                          | -- |
|      | 4      | ALU                         | 260-300        | 270-300                  | 300               | 200                | 185                                  | 220     | 30                      | ..02.92.00     | 268 | 80 | 258 | 83                   | 90 | 35                          | 40 |

<sup>1)</sup> Lifting heights acc. to TD-1242.0

<sup>2)</sup> Only suitable for semi-trailers / Centre axle drawbar trailer

<sup>3)</sup> The console is not included in supplied package

<sup>4)</sup> M = for diaphragm cylinder / F = for spring brake cylinder

| Axle type    | Track SP | Spring centre FM | Air cylinder centre GM | Air bag centre BM |      | Brake cyl. <sup>4)</sup> | Tyres recommended |
|--------------|----------|------------------|------------------------|-------------------|------|--------------------------|-------------------|
|              |          |                  |                        | V=20              | V=60 |                          |                   |
| NHZFALU 9010 | 1830     | 980              | 243                    | 940               | 860  | M / F                    | 245/70 R 17.5     |
| NHZFALU 9010 | 1880     | 980              | 243                    | 940               | 860  | M / F                    |                   |
| NHZFALU 9010 | 1950     | 1100             | 247                    | 1060              | 980  | M / F                    |                   |
| NHZFALU 9010 | 1995     | 1100             | 292                    | 1060              | 980  | M / F                    |                   |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height ±1°

With trailing arm L1=500 / L2=310, bag pressures acc. to TE-1188.0 sheet 18

With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 15

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

# Airlight II

Air-spring axles with drum brake SN 3620

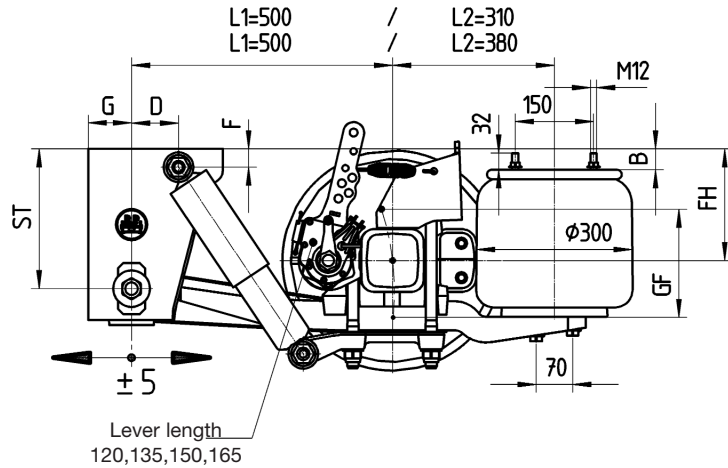
Series KHSFALU 9008/10 V30K/V30 KHZFALU 9008 V30K/V30

Ride height 175-300 mm

for trailers and semi-trailers

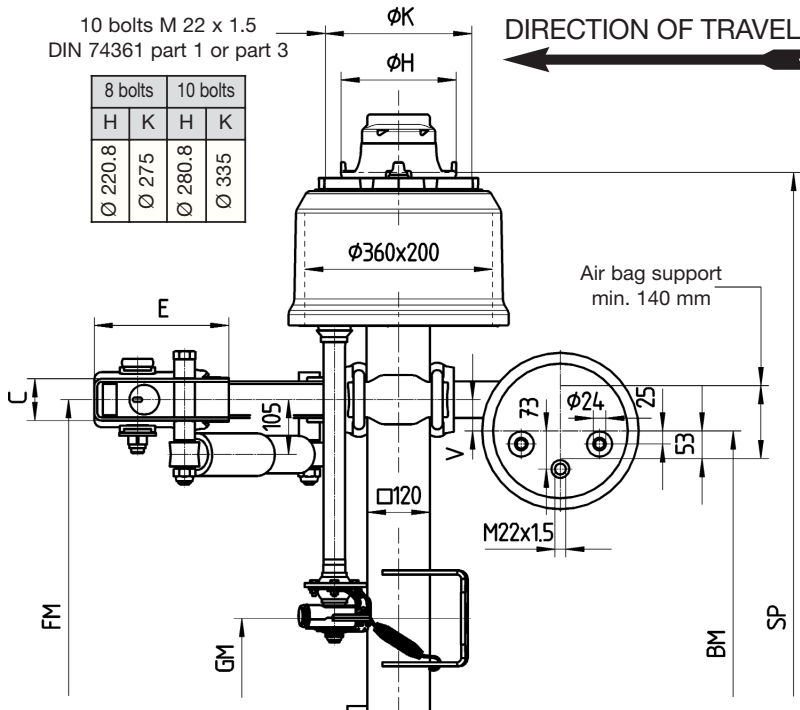
# AL II-SN.0

Sheet-no. 15b



10 bolts M 22 x 1.5  
DIN 74361 part 1 or part 3

| 8 bolts |       | 10 bolts |       |
|---------|-------|----------|-------|
| H       | K     | H        | K     |
| Ø 220.8 | Ø 275 | Ø 280.8  | Ø 335 |



| Line | Series | ~ adjustable ride height FH |                   |                                |                         |                          | Total spring<br>Travel (GF <sup>1)</sup> ) | Air bag | Shock<br>absorber<br>02.37... | Hanger bracket |     |    |     | Shock<br>absorber<br>mount |    | Con-<br>sole <sup>3)</sup><br>B |    |
|------|--------|-----------------------------|-------------------|--------------------------------|-------------------------|--------------------------|--|---------|-------------------------------|----------------|-----|----|-----|----------------------------|----|---------------------------------|----|
|      |        | For single<br>axles         | For axle<br>units | min. FH<br>with axle<br>raised | Empty<br>without<br>air | Loaded<br>without<br>air |  |         |                               | ST             | C   | E  | G   | D                          | F  |                                 |    |
| 2)   | 1      | ALU                         | 175-215           | 185-215                        | 215                     | 115                      | 100  | 190     | 30K                           | ..22.83.00     | 184 | 86 | 240 | 83                         | 70 | 35                              | -- |
|      | 2      | ALU                         | 205-255           | 215-255                        | 245                     | 145                      | 130  | 190     | 30K                           | ..02.92.00     | 268 | 80 | 258 | 83                         | 90 | 35                              | -- |
|      | 3      | ALU                         | 235-290           | 245-290                        | 275                     | 175                      | 160  | 220     | 30                            | ..02.92.00     | 268 | 80 | 258 | 83                         | 90 | 35                              | -- |
|      | 4      | ALU                         | 260-300           | 270-300                        | 300                     | 200                      | 185  | 220     | 30                            | ..02.92.00     | 268 | 80 | 258 | 83                         | 90 | 35                              | 40 |

1) Lifting heights acc. to TD-1242.0

2) Only suitable for semi-trailers / Centre axle drawbar trailer

3) The console is not included in supplied package

4) M = for diaphragm cylinder / F = for spring brake cylinder

5) The load rating of the tyre entered in the drawing is unrelated to the axle load capacity. It is dependent on the information from the tyre manufacturer.

| Axle type    | Track SP |        | Spring<br>centre<br>FM | Air cylinder<br>centre<br>GM | Air bag centre BM |      | Brake<br>cyl. <sup>4)</sup> | Tyres recommended                            |
|--------------|----------|--------|------------------------|------------------------------|-------------------|------|-----------------------------|--|
|              | ..9008   | ..9010 |                        |                              | V=20              | V=60 |                             |  |
| KHSFALU 90.. | 2045     | 2040   | 1200                   | 361                          | 1160              | 1080 | M/F                         | 385/65 R 19.5 <sup>5)</sup><br>425/55 R 19.5 |
| KHSFALU 90.. | 2045     | 2040   | 1300                   | 361                          | 1260              | 1180 | M/F                         |  |
| KHZFALU 90.. | 1835     | ---    | 980                    | 237                          | ---               | 860  | M/F                         | 245/70 R 19.5<br>265/70 R 19.5               |
| KHZFALU 90.. | 1885     | ---    | 980                    | 247                          | 940               | 860  | M/F                         |  |
| KHZFALU 90.. | 1935     | ---    | 1100                   | 297                          | ---               | 980  | M/F                         |  |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height ±1°

With trailing arm L1=500 / L2=310, bag pressures acc. to TE-1188.0 sheet 18

With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 15

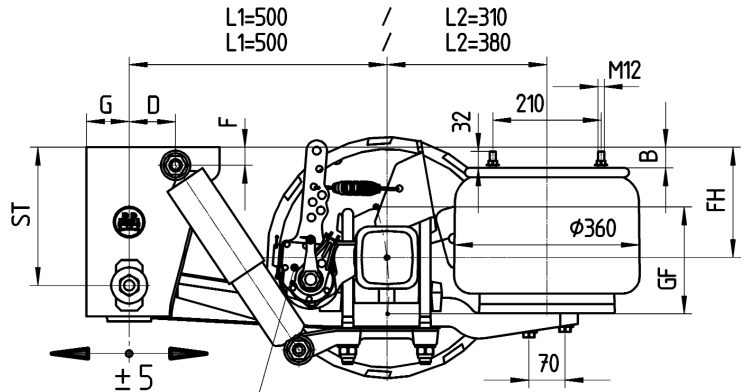
The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

# Airlight II

Air-spring axles with drum brake SN 4218  
Series HSFALU 9010 V36K/V36 HZFALU 9010 V36K/V36

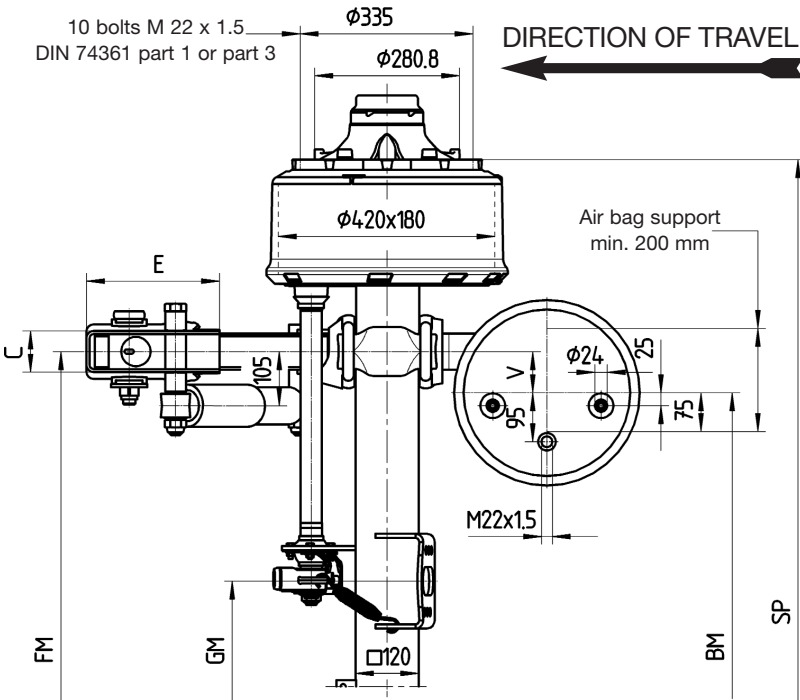
Ride height 175-300 mm  
for trailers and semi-trailers

**AL II-SN.0**  
Sheet-no. 16



Lever length  
120,135,150,165

10 bolts M 22 x 1.5  
DIN 74361 part 1 or part 3



| Line | Series | ≈ adjustable ride height FH |                |                          |                   |                    | Total spring travel GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    | Con-sole <sup>3)</sup> |
|------|--------|-----------------------------|----------------|--------------------------|-------------------|--------------------|--------------------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|------------------------|
|      |        | For single axles            | For axle units | min. FH with axle raised | Empty without air | Loaded without air |                                      |         |                         | ST             | C  | E   | G  | D                    | F  |                        |
| 1    | ALU    | 175-215                     | 185-215        | 215                      | 115               | 100                | 190                                  | 36K     | ..22.83.00              | 184            | 86 | 240 | 83 | 70                   | 35 | --                     |
| 2    | ALU    | 205-255                     | 215-255        | 245                      | 145               | 130                | 190                                  | 36K     | ..02.92.00              | 268            | 80 | 258 | 83 | 55                   | 35 | --                     |
| 3    | ALU    | 235-290                     | 245-290        | 275                      | 175               | 160                | 220                                  | 36      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | --                     |
| 4    | ALU    | 260-300                     | 270-300        | 300                      | 200               | 185                | 220                                  | 36      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | 40                     |

<sup>1)</sup> Lifting heights acc. to TD-1242.0

<sup>2)</sup> Only suitable for semi-trailers / Centre axle drawbar trailer

<sup>3)</sup> The console is not included in supplied package

<sup>4)</sup> M = for diaphragm cylinder / F = for spring brake cylinder

| Axle type   | Track SP | Spring centre FM | Air cylinder centre GM | Air bag centre BM | Brake cyl. <sup>4)</sup> | Tyres recommended |
|-------------|----------|------------------|------------------------|-------------------|--------------------------|-------------------|
|             |          |                  |                        | V=80              |                          |                   |
| HSFALU 9010 | 2010     | 1200             | 379                    | 1040              | M / F                    | 385/65 R 22.5     |
| HSFALU 9010 | 2040     | 1200             | 409                    | 1040              | M / F                    |                   |
| HSFALU 9010 | 2040     | 1300             | 409                    | 1140              | M / F                    |                   |
| HSFALU 9010 | 2095     | 1300             | 464                    | 1140              | M / F                    | 385/55 R 22.5     |
| HSFALU 9010 | 2140     | 1400             | 585                    | 1240              | M / F                    |                   |
| HZFALU 9010 | 1820     | 980              | 239                    | 820               | M                        | 275/70 R 22.5     |
| HZFALU 9010 | 1880     | 980              | 259                    | 820               | M                        |                   |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height ±1°

With trailing arm L1=500 / L2=310, bag pressures acc. to TE-1188.0 sheet 5

With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 11

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

# Airlight II

Air-spring axles with drum brake SN 3020

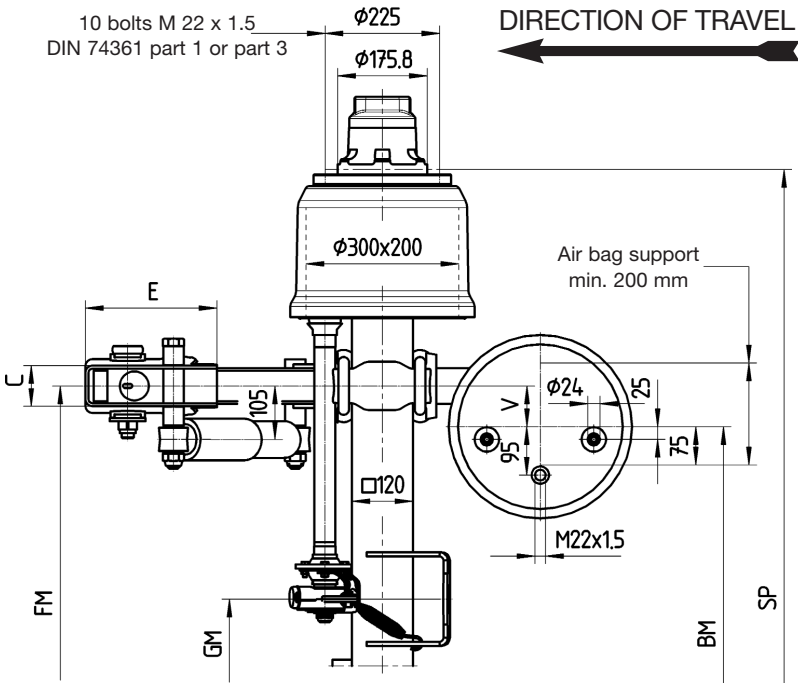
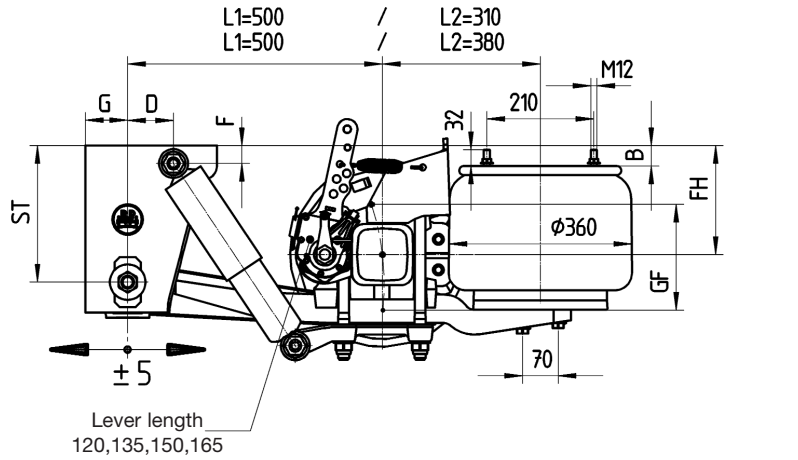
Series NHZFALU 9010 V36K/V36

Ride height 175-300 mm

for trailers and semi-trailers

## AL II-SN.0

Sheet-no. 16a



| Line | Series | ≈ adjustable ride height FH |                |                          |                   |                    | Total spring travel GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |     |    |     | Shock absorber mount |    | Con-sole <sup>3)</sup><br>B |    |
|------|--------|-----------------------------|----------------|--------------------------|-------------------|--------------------|--------------------------------------|---------|-------------------------|----------------|-----|----|-----|----------------------|----|-----------------------------|----|
|      |        | For single axles            | For axle units | min. FH with axle raised | Empty without air | Loaded without air |                                      |         |                         | ST             | C   | E  | G   | D                    | F  |                             |    |
| 2)   | 1      | ALU                         | 175-215        | 185-215                  | 215               | 115                | 100                                  | 190     | 36K                     | ..22.83.00     | 184 | 86 | 240 | 83                   | 70 | 35                          | -- |
|      | 2      | ALU                         | 205-255        | 215-255                  | 245               | 145                | 130                                  | 190     | 36K                     | ..02.92.00     | 268 | 80 | 258 | 83                   | 90 | 35                          | -- |
|      | 3      | ALU                         | 235-290        | 245-290                  | 275               | 175                | 160                                  | 220     | 36                      | ..02.92.00     | 268 | 80 | 258 | 83                   | 90 | 35                          | -- |
|      | 4      | ALU                         | 260-300        | 270-300                  | 300               | 200                | 185                                  | 220     | 36                      | ..02.92.00     | 268 | 80 | 258 | 83                   | 90 | 35                          | 40 |

1) Lifting heights acc. to TD-1242.0

2) Only suitable for semi-trailers / Centre axle drawbar trailer

3) The console is not included in supplied package

4) M = for diaphragm cylinder / F = for spring brake cylinder

5) Use F-air cylinder bracket with spring-loaded accumulator cylinder

| Axle type    | Track SP | Spring centre FM | Air cylinder centre GM | Air bag centre BM | Brake cyl. <sup>4)</sup> | Tyres recommended |
|--------------|----------|------------------|------------------------|-------------------|--------------------------|-------------------|
|              |          |                  |                        | V=80              |                          |                   |
| NHZFALU 9010 | 1830     | 980              | 243                    | 820               | M /(F) <sup>5)</sup>     | 245/70 R 17.5     |
| NHZFALU 9010 | 1880     | 980              | 243                    | 820               | M /(F) <sup>5)</sup>     |                   |
| NHZFALU 9010 | 1950     | 1100             | 247                    | 940               | M / F                    |                   |
| NHZFALU 9010 | 1995     | 1100             | 292                    | 940               | M / F                    |                   |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height  $\pm 1^\circ$

With trailing arm L1=500 / L2=310, bag pressures acc. to TE-1188.0 sheet 5

With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 11

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

# Airlight II

Air-spring axles with drum brake SN 3620

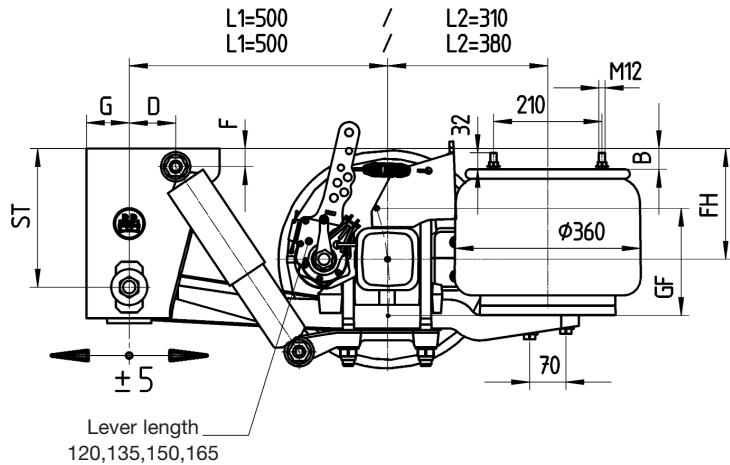
Series KHSFALU 9008/10 V36K/V36 KHZFALU 9008 V36K/V36

Ride height 175-300 mm

for trailers and semi-trailers

# AL II-SN.0

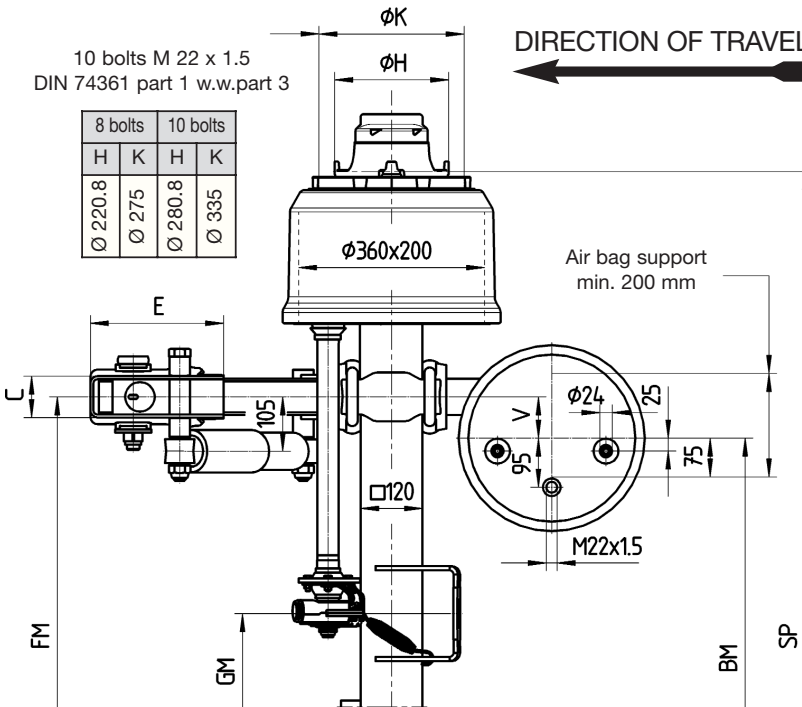
Sheet-no. 16b



10 bolts M 22 x 1.5  
DIN 74361 part 1 w.w.part 3

| 8 bolts |       | 10 bolts |       |
|---------|-------|----------|-------|
| H       | K     | H        | K     |
| Ø 220.8 | Ø 275 | Ø 280.8  | Ø 335 |

DIRECTION OF TRAVEL



| Line | Series | ~ adjustable ride height FH |                |                          |                   |                    | Total spring travel GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    | Con-sole <sup>3)</sup> |
|------|--------|-----------------------------|----------------|--------------------------|-------------------|--------------------|--------------------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|------------------------|
|      |        | For single axles            | For axle units | min. FH with axle raised | Empty without air | Loaded without air |                                      |         |                         | ST             | C  | E   | G  | D                    | F  |                        |
| 1    | ALU    | 175-215                     | 185-215        | 215                      | 115               | 100                | 190                                  | 36K     | ..22.83.00              | 184            | 86 | 240 | 83 | 70                   | 35 | --                     |
| 2    | ALU    | 205-255                     | 215-255        | 245                      | 145               | 130                | 190                                  | 36K     | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | --                     |
| 3    | ALU    | 235-290                     | 245-290        | 275                      | 175               | 160                | 220                                  | 36      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | --                     |
| 4    | ALU    | 260-300                     | 270-300        | 300                      | 200               | 185                | 220                                  | 36      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | 40                     |

1) Lifting heights acc. to TD-1242.0

2) Only suitable for semi-trailers / Centre axle drawbar trailer

3) The console is not included in supplied package

4) M = for diaphragm cylinder / F = for spring brake cylinder

5) Use F-air cylinder bracket with spring-loaded accumulator cylinder

6) The load rating of the tyre entered in the drawing is unrelated to the axle load capacity.

It is dependent on the information from the tyre manufacturer.

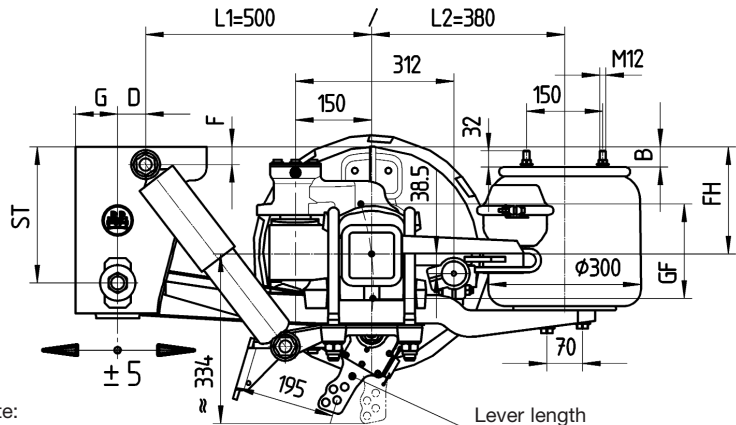
| Axle type    | Track SP |        | Spring centre FM | Air cylinder centre GM | Air bag centre BM V=80 | Brake cyl. <sup>4)</sup> | Tyres recommended              |
|--------------|----------|--------|------------------|------------------------|------------------------|--------------------------|--------------------------------|
|              | ..9008   | ..9010 |                  |                        |                        |                          |                                |
| KHSFALU 90.. | 2045     | 2040   | 1200             | 361                    | 1040                   | M/F                      | 385/65 R 19.5 <sup>6)</sup>    |
| KHSFALU 90.. | 2045     | 2040   | 1300             | 361                    | 1140                   | M/F                      | 425/55 R 19.5                  |
| KHZFALU 90.. | 1835     | ---    | 980              | 237                    | 820                    | M/(F) <sup>5)</sup>      | 245/70 R 19.5<br>265/70 R 19.5 |
| KHZFALU 90.. | 1885     | ---    | 980              | 247                    | 820                    | M/(F) <sup>5)</sup>      |                                |
| KHZFALU 90.. | 1935     | ---    | 1100             | 297                    | 940                    | M/F                      |                                |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height  $\pm 1^\circ$

With trailing arm L1=500 / L2=310, bag pressures acc. to TE-1188.0 sheet 5

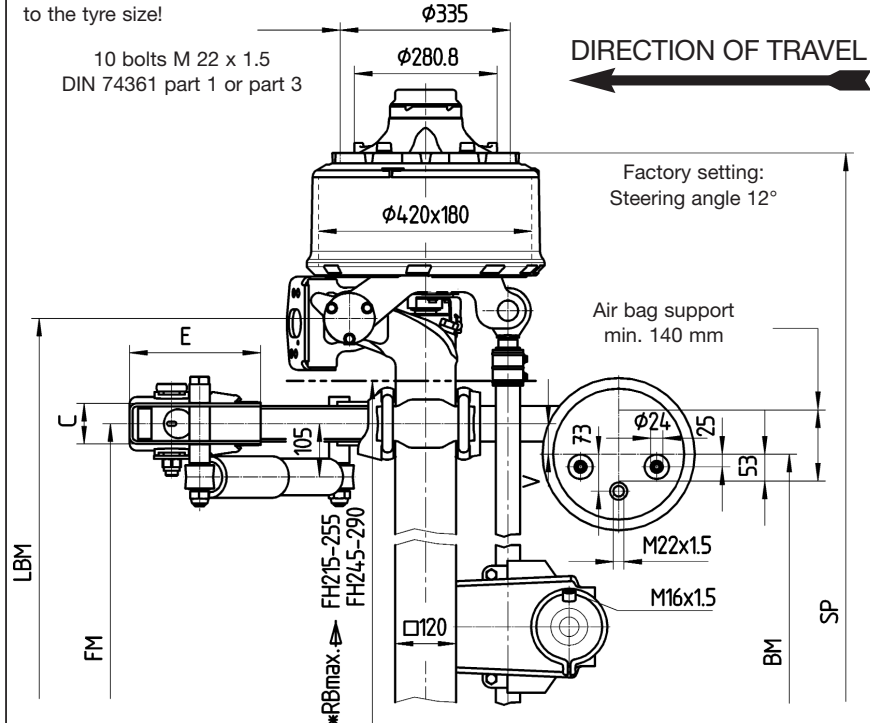
With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 11

The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.



Note:  
The ground clearance in relation to the tyre size!

10 bolts M 22 x 1.5  
DIN 74361 part 1 or part 3



| Line | Series | ~ adjustable ride height FH |                          |                   |                    | Total spring travel (GF 1) | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    | Con-sole <sup>2)</sup><br>B |
|------|--------|-----------------------------|--------------------------|-------------------|--------------------|----------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|-----------------------------|
|      |        | For axle units              | min. FH with axle raised | Empty without air | Loaded without air |                            |         |                         | ST             | C  | E   | G  | D                    | F  |                             |
| 4)   | ALULL  | 215-255                     | 245                      | 145               | 130                | 190                        | 30K     | ..02.92.00              | 268            | 80 | 258 | 83 | 55                   | 35 | --                          |
| 4)   | ALULL  | 245-290                     | 275                      | 175               | 160                | 220                        | 30      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | --                          |
| 4    | ALULL  | 270-300                     | 300                      | 200               | 185                | 220                        | 30      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | 40                          |

- 1) Lifting heights acc. to TD-1242.0
- 2) The console is not included in supplied package
- 3) M = diaphragm cylinder
- 4) Note maximum frame width RBmax

| Axle type      | Track SP | Spring centre FM | Steering pivot centre LBM | *RBmax. | Air bag centre BM |      | Brake cyl. <sup>3)</sup> | Tyres recommended |
|----------------|----------|------------------|---------------------------|---------|-------------------|------|--------------------------|-------------------|
|                |          |                  |                           |         | V=20              | V=60 |                          |                   |
| HSFHALULL 9010 | 2040     | 980              | 1395                      | 1150    | 940               | 860  | M                        | 385/65 R 22.5     |
| HSFHALULL 9010 | 2095     | 1080             | 1450                      | 1205    | 1040              | 960  | M                        | 385/55 R 22.5     |
| HSFHALULL 9010 | 2140     | 1080             | 1495                      | 1250    | 1040              | 960  | M                        |                   |

max. inclination angle of the semi-trailer under full load and lowest adjustable ride height  $\pm 1^\circ$   
With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 15  
The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

With an axle load ratio - rigid axle to steering axle - of 1:1, in suspension units with a lifting axle and when using central lubrication systems, the steering axle must be equipped with a steering damper.

| Leaf spring |     | Steering tie rod position | Steering damper parts kit | Drawing      |
|-------------|-----|---------------------------|---------------------------|--------------|
| L1          | L2  |                           |                           |              |
| 500         | 380 | 312 / 38,5                | 05.872.00.51.0            | 04.00.073019 |

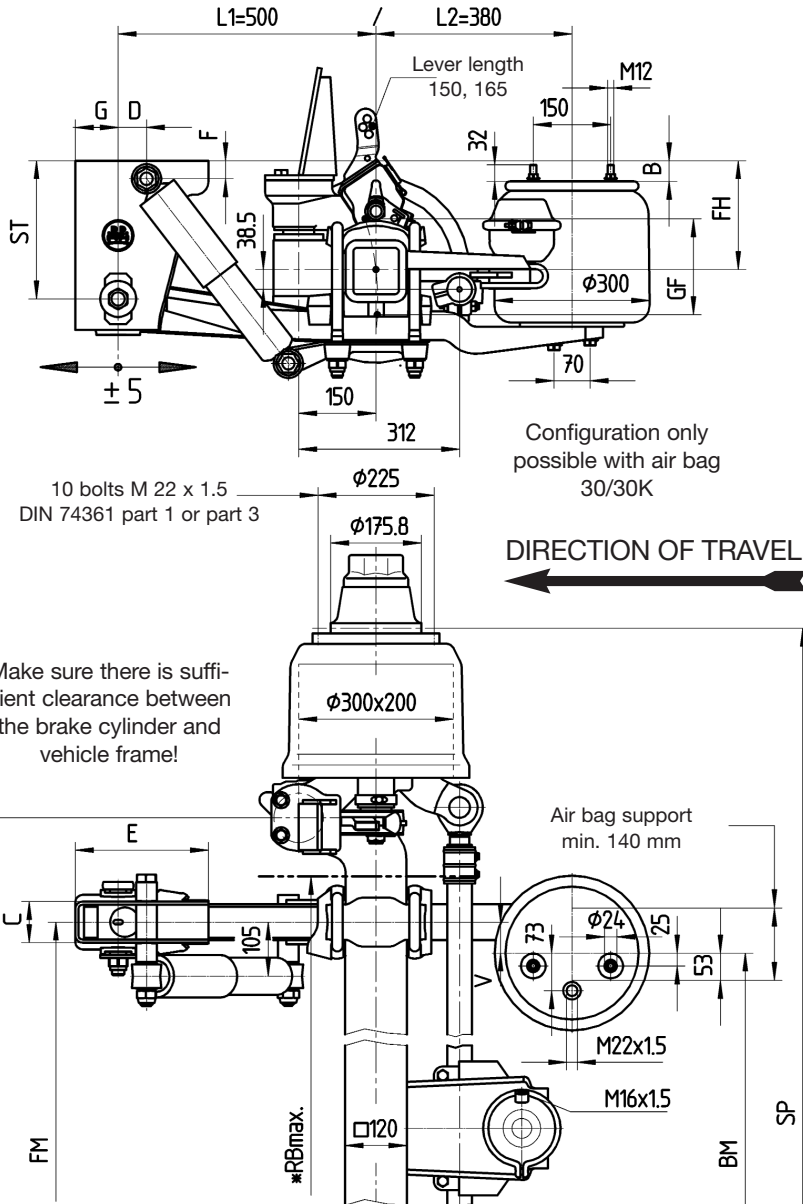


# Airlight II

Self-steering axles with drum brake SN 3020  
Series NHZFULULL 9010 V30K/V30

Ride height 215-300 mm  
for semi-trailer

AL II-SN.0  
Sheet-no. 17a



| Line | Series | ~ einstellbare Fahrhöhe FH |                          |                   |                    | Total spring travel (GF <sup>1)</sup> | Air bag | Shock absorber 02.37... | Hanger bracket |    |     |    | Shock absorber mount |    | Con-sole <sup>2)</sup><br>B |
|------|--------|----------------------------|--------------------------|-------------------|--------------------|---------------------------------------|---------|-------------------------|----------------|----|-----|----|----------------------|----|-----------------------------|
|      |        | For axle units             | min. FH with axle raised | Empty without air | Loaded without air |                                       |         |                         | ST             | C  | E   | G  | D                    | F  |                             |
| 2    | ALULL  | 215-255                    | 245                      | 145               | 130                | 190                                   | 30K     | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | --                          |
| 3    | ALULL  | 245-290                    | 275                      | 175               | 160                | 220                                   | 30      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | --                          |
| 4    | ALULL  | 270-300                    | 300                      | 200               | 185                | 220                                   | 30      | ..02.92.00              | 268            | 80 | 258 | 83 | 90                   | 35 | 40                          |

- 1) Lifting heights acc. to TD-1242.0
- 2) The console is not included in supplied package
- 3) M = for diaphragm cylinder / F = for spring brake cylinder

| Axle type      | Track SP | Spring centre FM | Steering pivot centre LBM | Steering angle LE | *RBmax with diaphragm cyl Typ 24 | Air bag centre BM V=60 | Brake cyl. <sup>3)</sup> | Tyres recommended |
|----------------|----------|------------------|---------------------------|-------------------|----------------------------------|------------------------|--------------------------|-------------------|
| NHZFULULL 9010 | 1945     | 840              | 1210                      | 20°               | 920                              | 720                    | M / F                    | 245/70 R 17.5     |
| NHZFULULL 9010 | 1985     | 840              | 1250                      | 20°               | 960                              | 720                    | M / F                    |                   |

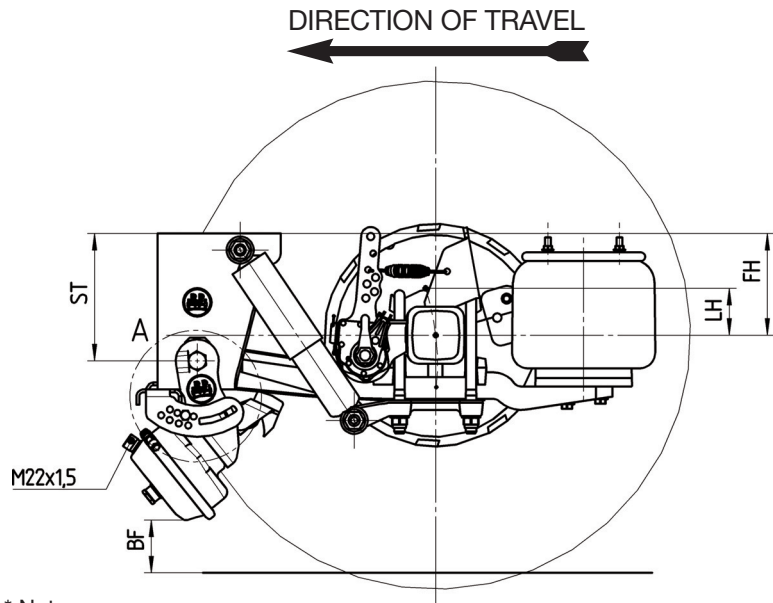
max. inclination angle of the semi-trailer under full load and lowest adjustable ride height  $\pm 1^\circ$   
With trailing arm L1=500 / L2=380, bag pressures acc. to TE-1188.0 sheet 15  
The hanger brackets, air bag supports and the frame must be reinforced so that the forces applied can be absorbed. See the current BPW installation instructions.

With an axle load ratio - rigid axle to steering axle - of 1:1, in suspension units with a lifting axle and when using central lubrication systems, the steering axle must be equipped with a steering damper.

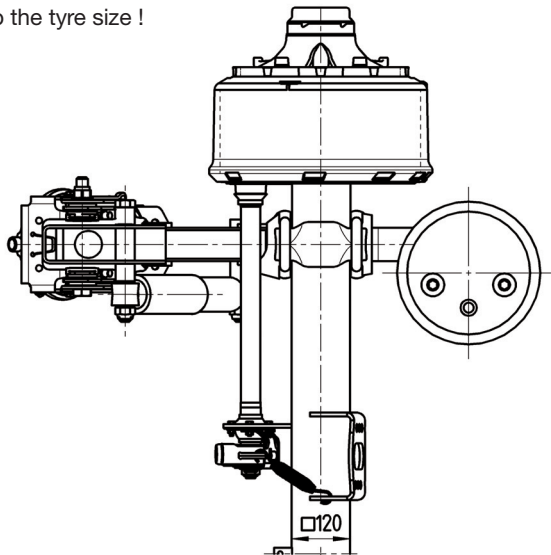
| Leaf spring |     | Steering tie rod position | Steering damper parts kit | Drawing      |
|-------------|-----|---------------------------|---------------------------|--------------|
| L1          | L2  |                           |                           |              |
| 500         | 380 | 312 / 38.5                | 05.872.00.51.0            | 04.00.073019 |







\* Note:  
the ground clearance in  
relation to the tyre size !



| Suspensions<br>to drawing<br>ALII-SN.0<br>Sheet-no. | ≈ adjustable ride height FH |                             | min.<br>Lifting<br>stroke<br>LH | Support<br>height<br>ST | Ground<br>clearance<br>BF <sup>1)</sup> | Position<br>Lift stop<br>No. |
|---|-----------------------------|-----------------------------|---------------------------------|-------------------------|---|------------------------------|
|   | For axle<br>units           | min. FH with<br>axle raised |                                 |                         |   |                              |
| Sheet<br>15, 15a, 15b                               | 185-215                     | 215                         | 100                             | 184                     | 200                                     | 4                            |
|   | 215-255 <sup>2)</sup>       | 245                         | 100                             | 268                     | 143                                     | 7                            |
| Sheet<br>16, 16a, 16b                               | 245-290 <sup>2)</sup>       | 275                         | 100                             | 268                     | 176                                     | 4                            |
|   | 270-300                     | 300                         | 100                             | 268                     | 205                                     | 8                            |

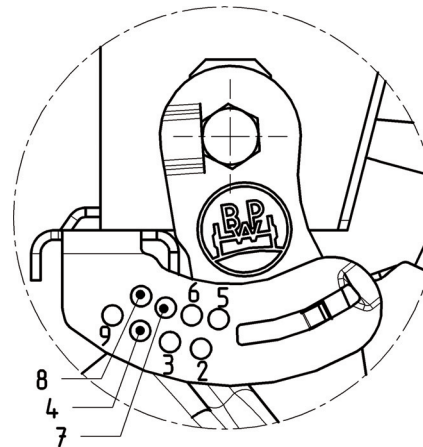
<sup>1)</sup> Ground clearance in relation to the set minimum ride height with the axle raised.

\* Tyre: 385/65 R 22.5 ( $r_{stat} = 496$ )

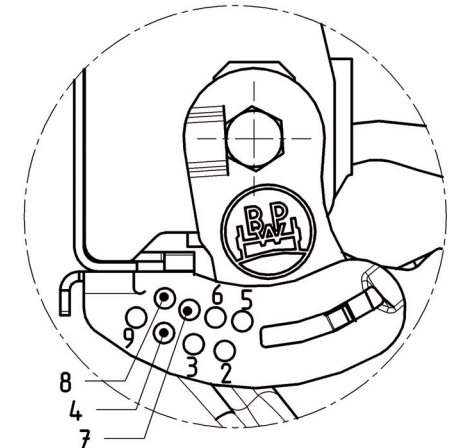
In the case of smaller tyres, it is necessary to check whether the double-sided axle lift can be used, according to the application.

<sup>2)</sup> Due the lower ground clearance, it is necessary to check whether the double-sided axle lift can be used, according to the application.

Detail A  
Support configuration



Detail A  
Channel cross member configuration



In the lifting and lowering version, the total spring travel must be limited by a shut-off valve.

Minimum air pressure for lifting the axle approx. 6 bar.

The hanger brackets, air bag supports and the frame must be strengthened so that they can adsorb the forces applied. See the current BPW installation instructions.