

MB-5 MONOBLOCK VALVE



# MB-5 HANDSTEUERVENTIL

**HYDROMOT**  
*Hydraulic solutions.*

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## Handsteuerventile MB-5

- kompakte Bauweise
- geringe Druckverluste
- hohe Lebensdauer und Wirtschaftlichkeit
- verschiedene Anschlussmöglichkeiten und Kreislaufsteuerungen
- langanhaltende Steuerungspräzision

## Monoblock Valve MB-5

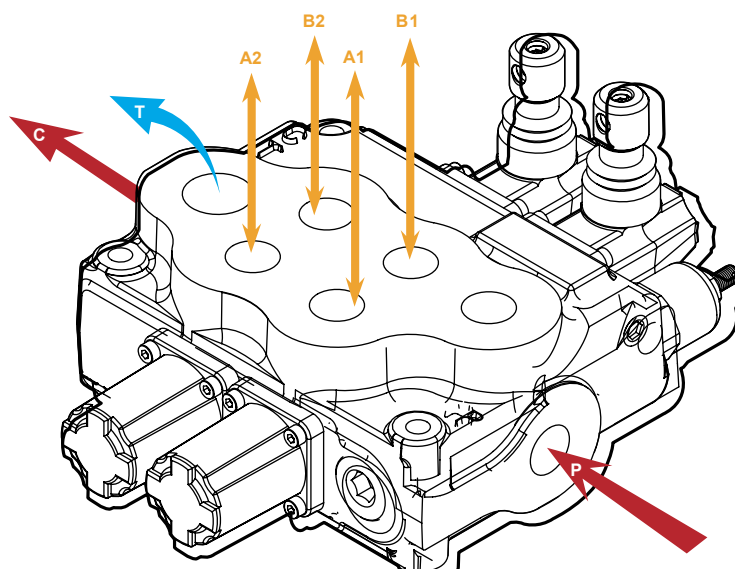
- compact construction
- low pressure drop
- long service life and efficiency
- various ports and circuits
- long term accuracy



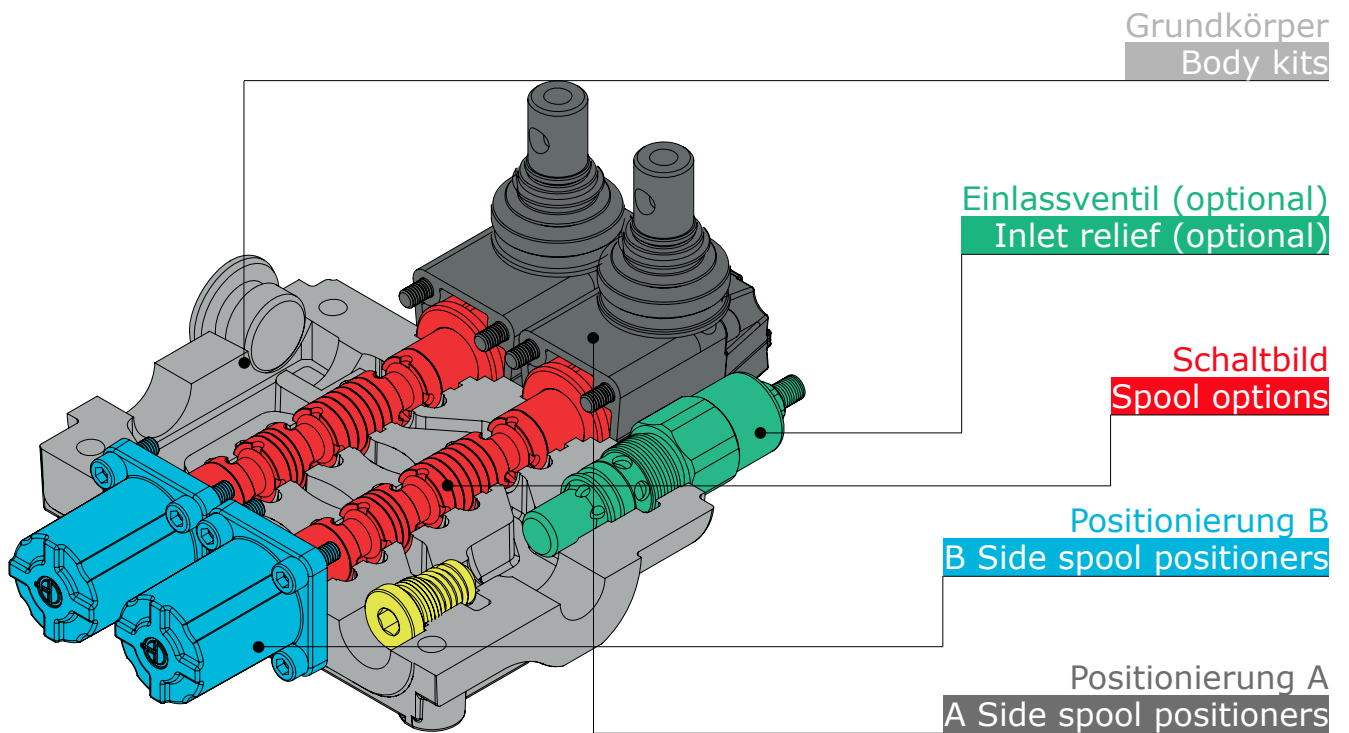
## Technische Daten | Technical Data

|  |   |                           |
|--|---|---------------------------|
| Volumenstrom [l/min]<br>Flow rate  |   | 80                        |
| Max. Arbeitsdruck [bar]<br>Max. operating pressure                             | Parallel oder Reihenschaltung<br>Parallel or tandem circuit | 315                       |
|  | Reihenschaltung<br>Series circuit                           | 210                       |
| Max. Gegendruck an Tankanschluss T [bar]<br>Max. back pressure on outletport T |   | 25                        |
| Temperaturbereich Einsatzmittel [°C]<br>Fluid temperature range                | NBR (BUNA-N) Dichtung<br>NBR (BUNA-N) seal                  | -20 bis 80<br>-20 to 80   |
|  | FPM (Viton) Dichtung<br>FPM (Viton) seal                    | -20 bis 100<br>-20 to 100 |
| Viskosität [mm²/s]<br>Viscosity  | Arbeitsbereich<br>Operating range                           | 15 bis 75<br>15 to 75     |
|  | Min.  | 12                        |
|  | Max.  | 400                       |
| Umgebungstemperatur [°C]<br>Ambient temperature                                |   | -40 bis 60<br>-40 to 60   |

## Installationshinweis | Mounting Instruction



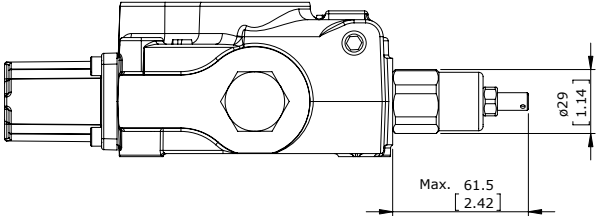
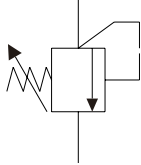
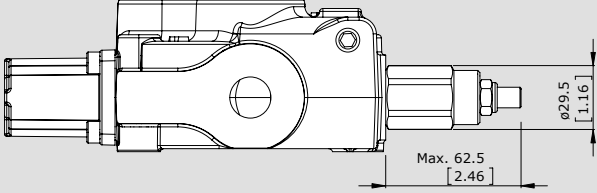
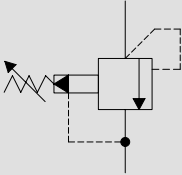
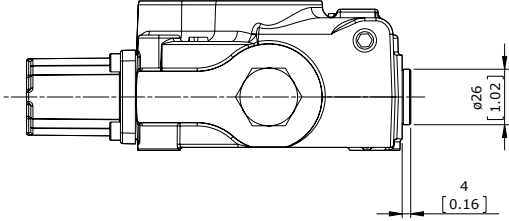
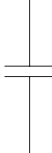
## Prinzipieller Aufbau | Basic Construction




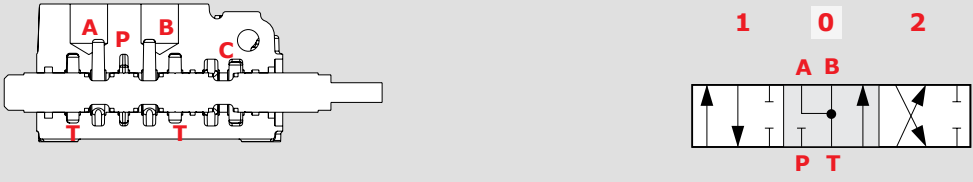

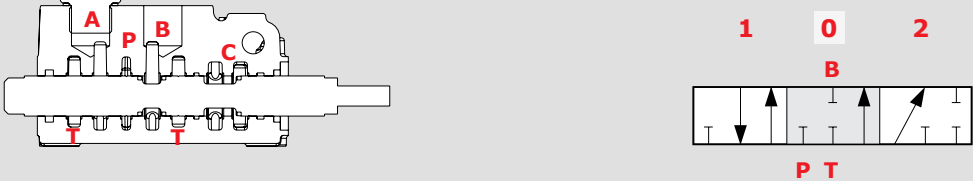
## Grundkörper | Body Kits

| Typ<br>Type | Beschreibung<br>Description |
|-------------|-----------------------------|
| <b>1S</b>   | 1 Sektion<br>1 Section      |
| <b>2S</b>   | 2 Sektion<br>2 Section      |
| <b>3S</b>   | 3 Sektion<br>3 Section      |
| <b>4S</b>   | 4 Sektion<br>4 Section      |
| <b>5S</b>   | 5 Sektion<br>5 Section      |
| <b>6S</b>   | 6 Sektion<br>6 Section      |


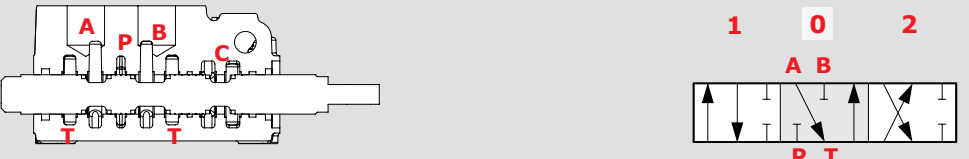

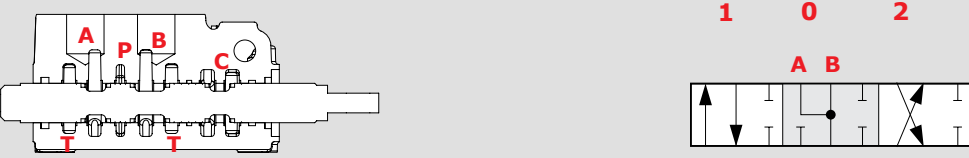
## Einlassventil | Inlet Relief

| Typ<br>Type | Beschreibung<br>Description   |
|-------------|---|
| 3           | <p>Arbeitsbereich von 125 bis 250 Bar, Standardeinstellung 120 Bar<br/>Range 125 to 250 Bar, standard setting 120 Bar</p> <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="text-align: center;"> <p>DBV<br/>pressure relief valve</p>  </div> </div>           |
| 4           | <p>Arbeitsbereich von 160 bis 315 Bar, Standardeinstellung 220 Bar<br/>Range 200 to 315 Bar, standard setting 220 Bar</p> <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="text-align: center;"> <p>Pilot DBV<br/>pressure relief valve</p>  </div> </div> |
| VS          | <p>Verschlussstopfen<br/>Blanking plug</p> <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="text-align: center;">  </div> </div>   |


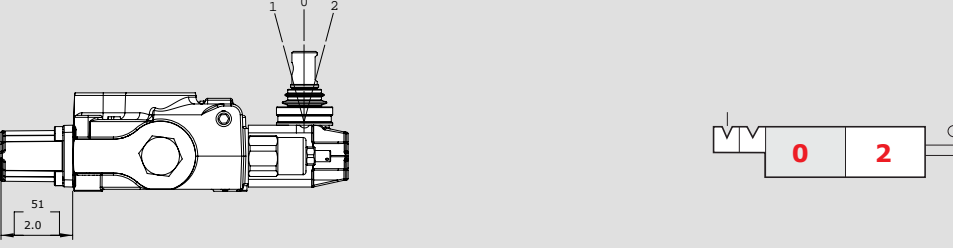

## Schaltbilder | Spool Options

| Typ<br>Type   | Beschreibung<br>Description   |
|---|---|
| <b>1</b>  | 3 Positionen, doppelwirkend, A-B-P-T geschlossen in Nullstellung<br>3 Positions, double acting, with A-B-P-T closed in neutral position                     |
|  <p>The cross-section shows a spool valve with ports A, P, B, and C. The schematic diagram shows three positions: 1 (A to P, B to T), 0 (neutral, all closed), and 2 (B to P, A to T).</p>          |   |
| <b>2</b>  | 3 Positionen, doppelwirkend, A-B-T verbunden in Nullstellung, P geschlossen<br>3 Positions, double acting, with A-B open to T in neutral position, P closed |
|  <p>The cross-section shows a spool valve with ports A, P, B, and C. The schematic diagram shows three positions: 1 (A to P, B to T), 0 (neutral, A-B to T, P closed), and 2 (B to P, A to T).</p> |   |
| <b>3</b>  | 3 Positionen, einfachwirkend an A, A-P-T geschlossen, B verschlossen<br>3 Positions, single acting on A, A-P-T closed in neutral position, B plugged        |
|  <p>The cross-section shows a spool valve with ports A, P, B, and C. The schematic diagram shows three positions: 1 (A to P), 0 (neutral, all closed), and 2 (A to T).</p>                        |   |
| <b>4</b>  | 3 Positionen, einfachwirkend an B, B-P-T geschlossen, A verschlossen<br>3 Positions, single acting on B, B-P-T closed in neutral position, A plugged        |
|  <p>The cross-section shows a spool valve with ports A, P, B, and C. The schematic diagram shows three positions: 1 (B to P), 0 (neutral, all closed), and 2 (B to T).</p>                        |   |

## Schaltbilder | Spool Options


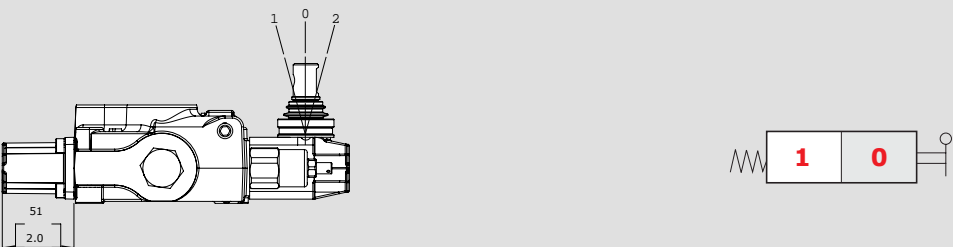

| Typ<br>Type  | Beschreibung<br>Description   |
|--|---|
| <b>5</b>   | 3 Positionen, doppelwirkend, B-T verbunden in Nullstellung, A und P geschlossen<br>3 Positions, double acting, with B open to T in neutral position, A and P closed |
|  <p>The cross-section shows a spool valve with ports A, P, B, and C on top, and T on the bottom. The schematic shows three positions: 1 (A to T, B to T), 0 (A and P closed, B to T), and 2 (B to T, A to T).</p>      |   |
| <b>6</b>   | 3 Positionen, doppelwirkend, A-T verbunden in Nullstellung, B und P geschlossen<br>3 Positions, double acting, with A open to T in neutral position, B and P closed |
|  <p>The cross-section shows a spool valve with ports A, P, B, and C on top, and T on the bottom. The schematic shows three positions: 1 (A to T, B to T), 0 (A to T, B and P closed), and 2 (B to T, A to T).</p>     |   |
| <b>9</b>   | 3 Positionen, doppelwirkend, A-B-P-T geschlossen in Nullstellung<br>3 Positions, double acting, with A-B-P-T closed in neutral position (Closed center)             |
|  <p>The cross-section shows a spool valve with ports A, P, B, and C on top, and T on the bottom. The schematic shows three positions: 1 (A to T, B to T), 0 (A-B-P-T closed), and 2 (B to T, A to T).</p>            |   |
| <b>10</b>  | 3 Positionen, doppelwirkend, A-B-T verbunden, P geschlossen<br>3 Positions, double acting, A-B open to T, P closed (Closed center)                                  |
|  <p>The cross-section shows a spool valve with ports A, P, B, and C on top, and T on the bottom. The schematic shows three positions: 1 (A to T, B to T), 0 (A-B-T connected, P closed), and 2 (B to T, A to T).</p> |   |

## Positionierer B | B Side Spool Positioners


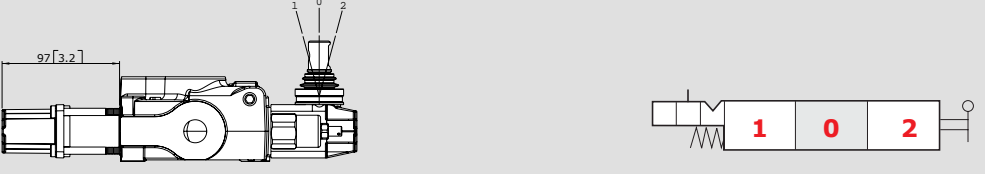

| Typ<br>Type  | Beschreibung<br>Description  |
|--|--|
| <b>6-1</b>   | 3 Positionen, Rastung in Pos. 1-0-2, ohne Federzentrierung<br>3 Positions, detent in pos. 1-0-2, without spring centered |
|    |  |
| <b>6-2</b>   | 2 Positionen, Rastung in Pos. 0-2, ohne Federzentrierung<br>2 Positions, detent in pos. 0-2, without spring centered     |
|  |  |
| <b>6-3</b>   | 2 Positionen, Rastung in Pos. 1-0, ohne Federzentrierung<br>2 Positions, detent in pos. 1-2, without spring centered     |
|  |  |



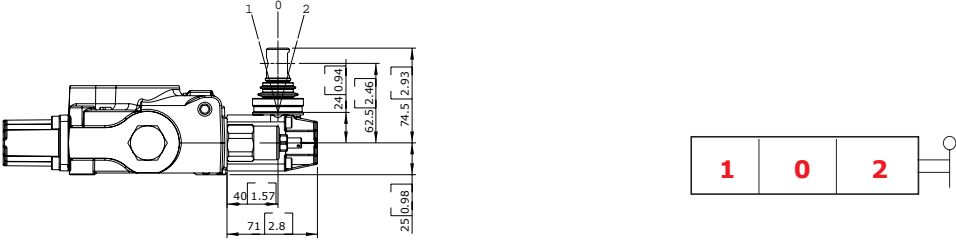
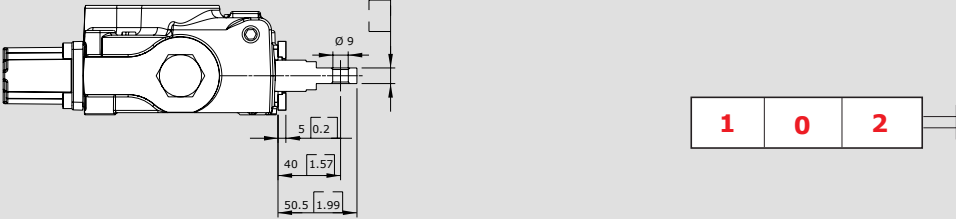
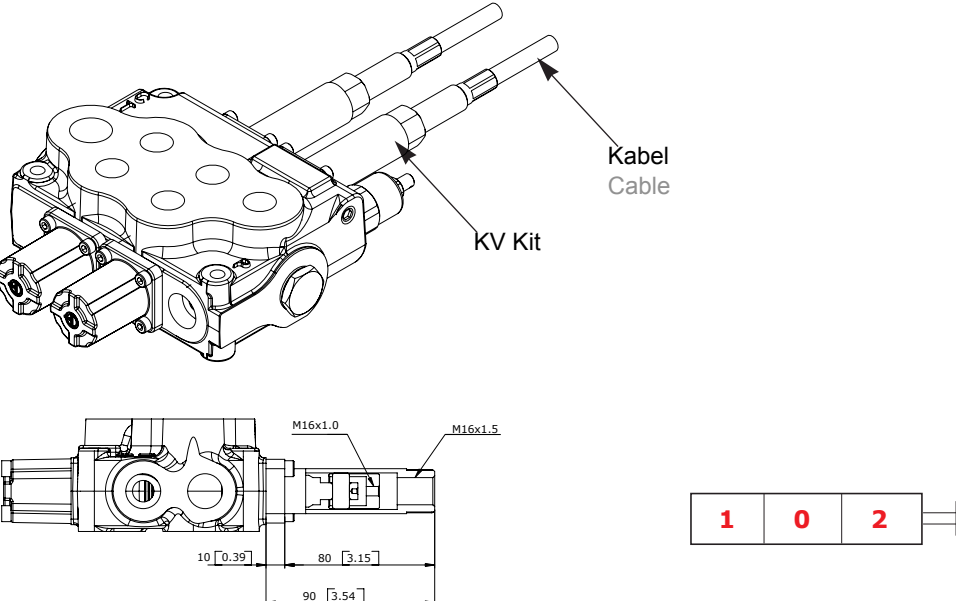
## Positionierer B | B Side Spool Positioners

| Typ<br>Type  | Beschreibung<br>Description   |
|--|---|
| <b>8</b>   | 3 Positionen, Federzentrierung zur Neutralstellung<br>3 Positions, spring return to neutral |
|    |   |
| <b>8-1</b>   | 2 Positionen, Federzentrierung zur Neutralstellung<br>2 Positions, spring return to neutral |
|  |   |
| <b>8-2</b>   | 2 Positionen, Federzentrierung zur Neutralstellung<br>2 Positions, spring return to neutral |
|  |   |

## Positionierer B | B Side Spool Positioners

| Typ<br>Type  | Beschreibung<br>Description   |
|--|---|
| <b>9-1</b>   | 3 Positionen, Rastung in Pos. 1-2, Federzentrierung<br>3 Positions, detent in pos. 1-2, spring centered |
|    |   |
| <b>9-2</b>   | 3 Positionen, Rastung in Pos. 2, Federzentrierung<br>3 Positions, detent in pos. 2, spring centered     |
|  |   |
| <b>9-3</b>   | 3 Positionen, Rastung in Pos. 1, Federzentrierung<br>3 Positions, detent in pos. 1, spring centered     |
|  |   |

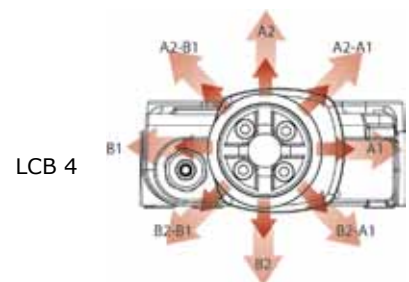
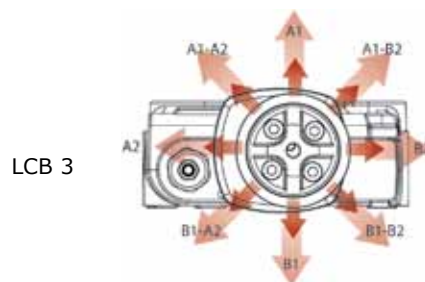
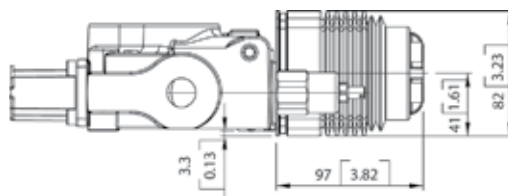
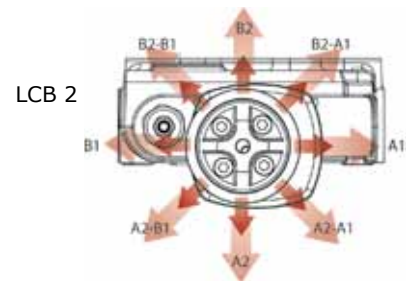
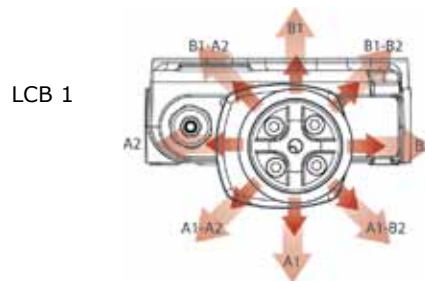
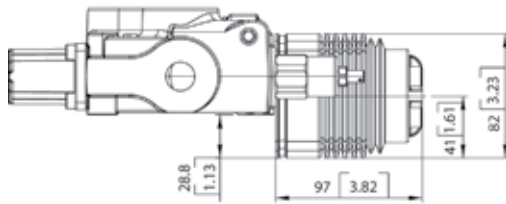
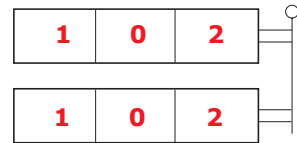
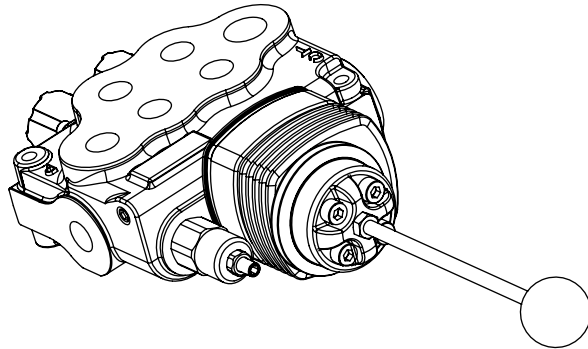
## Positionierer A | A Side Spool Positioners

| Typ<br>Type | Beschreibung<br>Description  |
|-------------|--|
| <b>L</b>    | <p><b>Standardhandhebel</b><br/>Standard lever box</p>  <p>Technical drawing of the standard lever box (L) showing dimensions: 40 [1.57], 71 [2.8], 25 [0.98], 24 [0.94], 62.5 [2.46], 74.5 [2.93]. A spool configuration diagram shows positions 1, 0, and 2.</p>   |
| <b>SPL</b>  | <p><b>Staubschutzplatte, ohne Handhebel</b><br/>With dust-proof plate</p>  <p>Technical drawing of the dust-proof plate (SPL) showing dimensions: 0.9, 5 [0.2], 40 [1.57], 50.5 [1.99]. A spool configuration diagram shows positions 1, 0, and 2.</p>   |
| <b>KV</b>   | <p><b>Flexible Kabelverbindung (beinhaltet keine Kabel)</b><br/>Flexible cable connection (not include cable)</p>  <p>Technical drawing of the flexible cable connection (KV) showing dimensions: 10 [0.39], 80 [3.15], 90 [3.54]. Labels include KV Kit and Kabel Cable. A spool configuration diagram shows positions 1, 0, and 2.</p> |

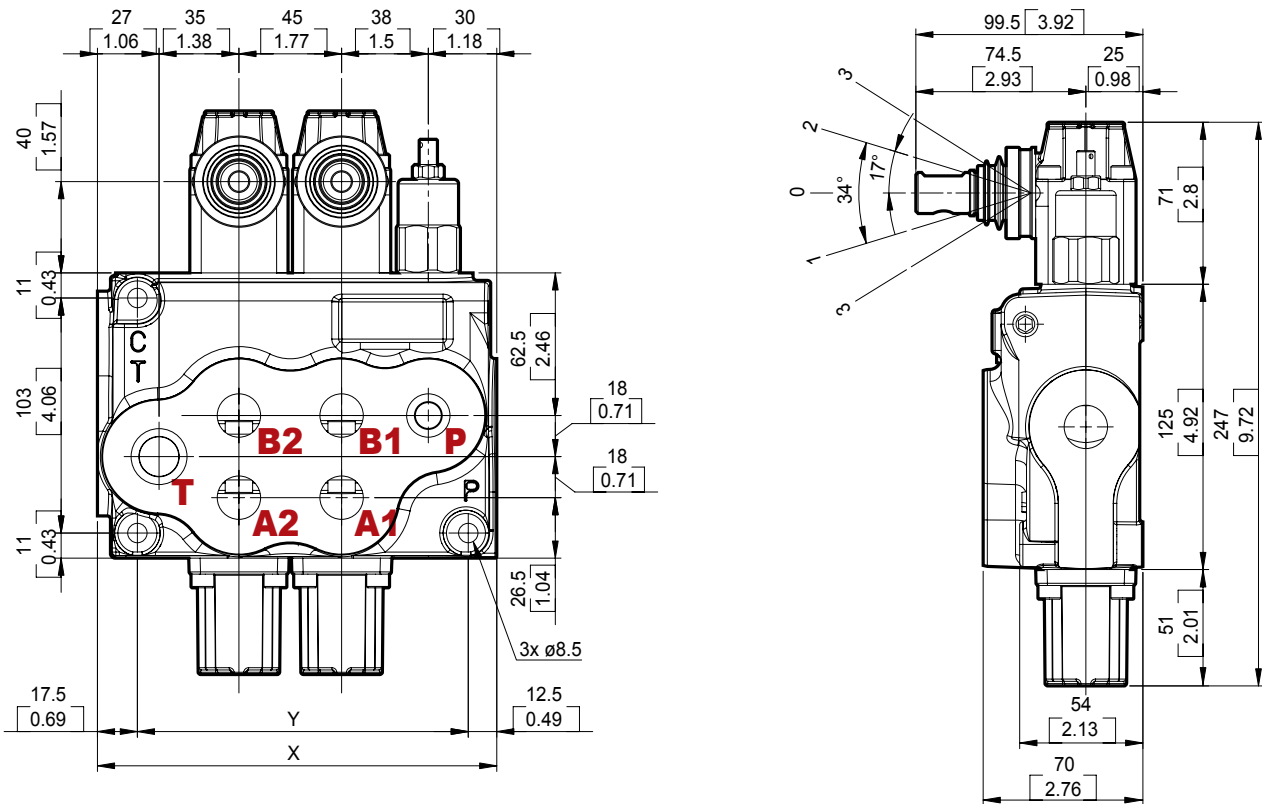
## Positionierer A | A Side Spool Positioners

| Typ<br>Type | Beschreibung<br>Description |
|-------------|-----------------------------|
|-------------|-----------------------------|

|            |                      |
|------------|----------------------|
| <b>LCB</b> | Joystick<br>Joystick |
|------------|----------------------|



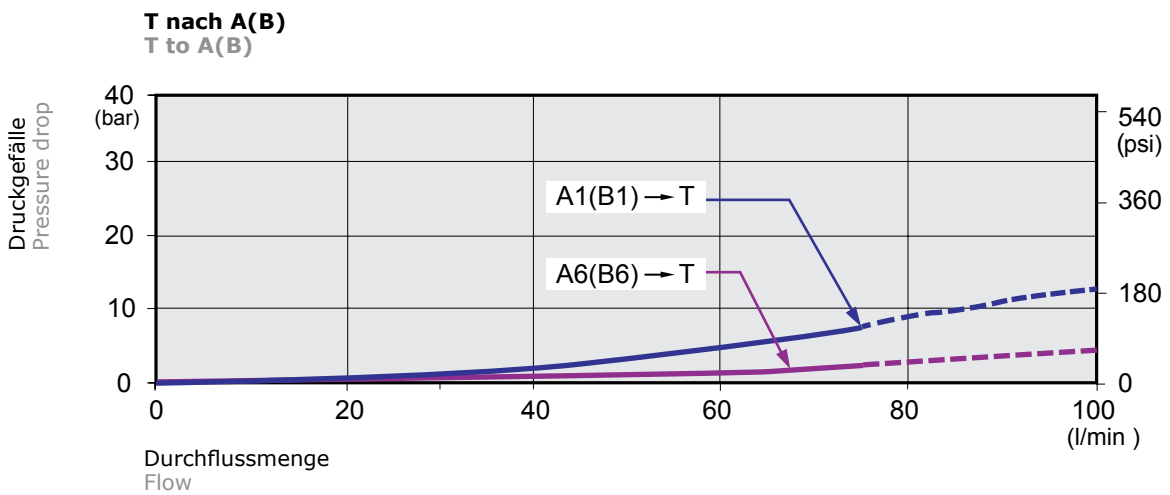
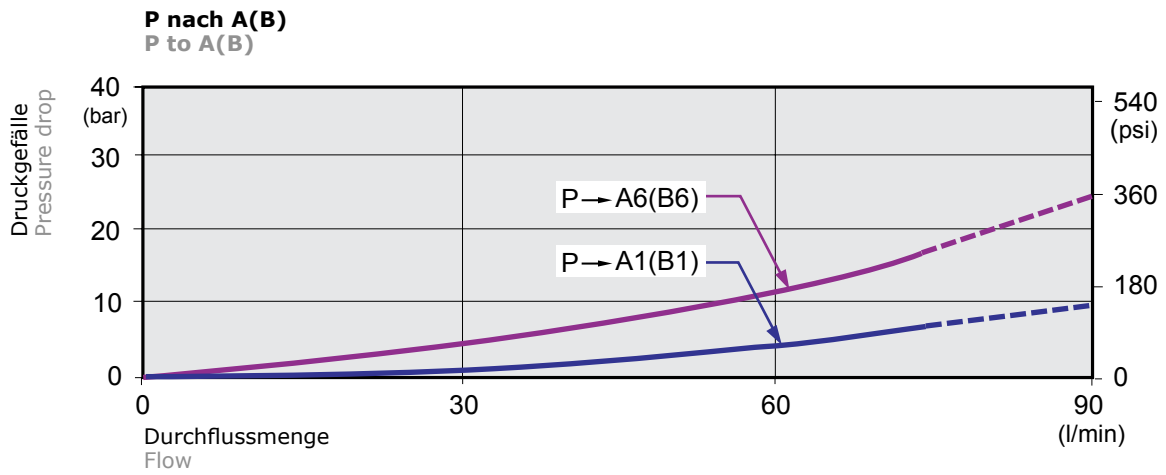
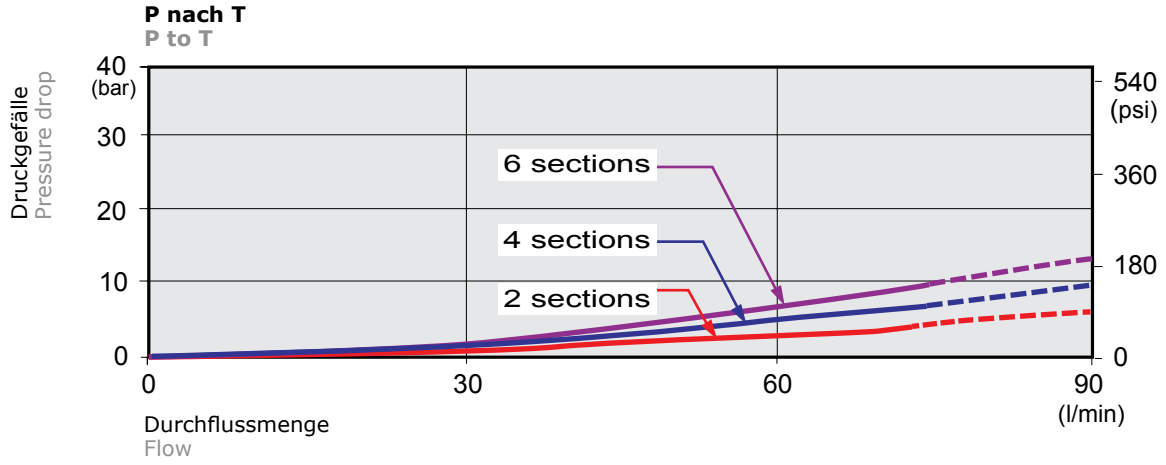
## Einbaumaße MB-5 | Dimensions MB-5



| Typ<br>Type | X     |       | Y   |       |
|-------------|-------|-------|-----|-------|
|             | mm    | in    | mm  | in    |
| MB-5/1S     | 130   | 5.12  | 100 | 3.94  |
| MB-5/2S     | 174.5 | 6.87  | 145 | 5.71  |
| MB-5/3S     | 219.5 | 8.64  | 190 | 7.48  |
| MB-5/4S     | 264.5 | 10.41 | 235 | 9.25  |
| MB-5/5S     | 309.5 | 12.19 | 280 | 11.02 |
| MB-5/6S     | 354.5 | 13.96 | 325 | 12.80 |

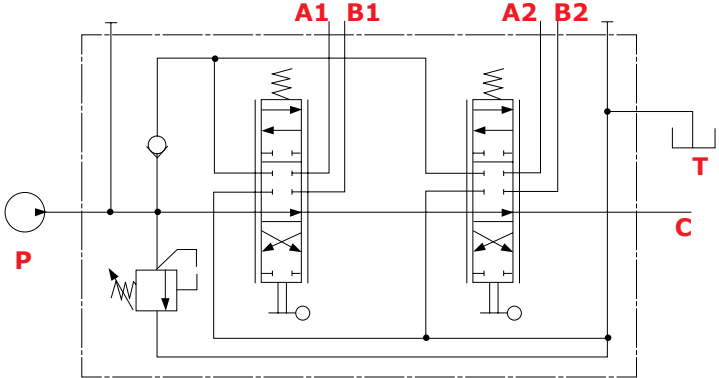
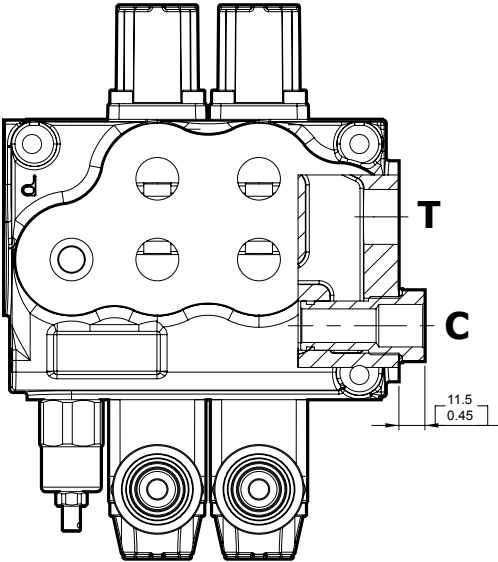
| Anschlüsse<br>Ports | P                     | A / B               | T                     |
|---------------------|-----------------------|---------------------|-----------------------|
| BSP (standard)      | G1/2                  | G1/2                | G3/4                  |
| UN-UNF              | 1"1/16-12 UN (SAE 12) | 7/8-14 UNF (SAE 10) | 1"1/16-12 UN (SAE 12) |
| Metrisch<br>Metric  | M18x1.5               | M18x1.5             | M22x1.5               |

## Leistungskurve MB-5 | Performance Curve Chart MB-5

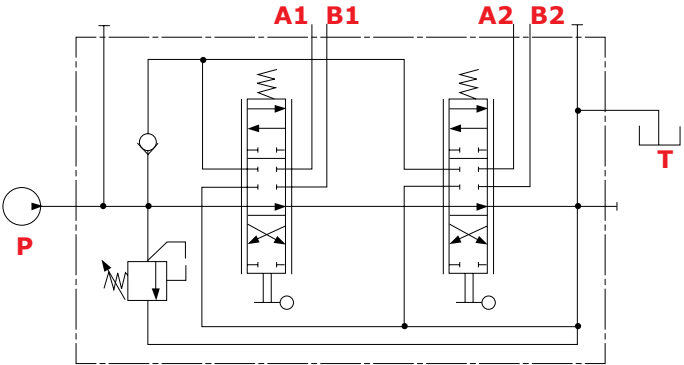
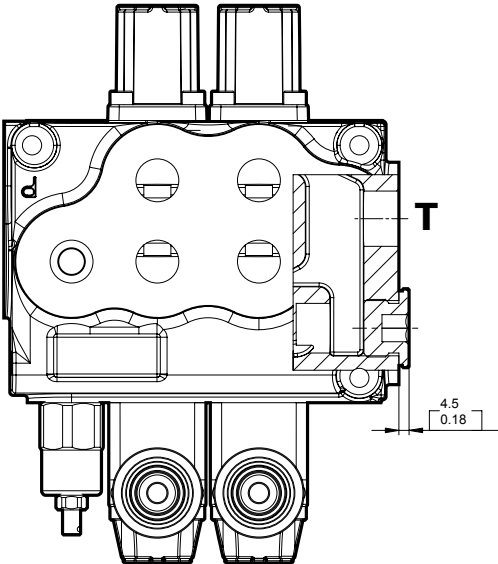


## Druckweiterführung MB-5 | Outlet MB-5

### M8



### M3



## Bestellinformation MB-5 | Order Information MB-5

| MB-5      | /  | 1 | - | 2 | / | 3 | 4 | 5 | / | 6 |
|-----------|--|---|---|---|---|---|---|---|---|---|
| Pos. 1    | Grundkörper   Body kits  |   |   |   |   |   |   |   |   |   |
| <b>1S</b> | 1 Sektion<br>1 Section   |   |   |   |   |   |   |   |   |   |
| <b>2S</b> | 2 Sektion<br>2 Section   |   |   |   |   |   |   |   |   |   |
| <b>3S</b> | 3 Sektion<br>3 Section   |   |   |   |   |   |   |   |   |   |
| <b>4S</b> | 4 Sektion<br>4 Section   |   |   |   |   |   |   |   |   |   |
| <b>5S</b> | 5 Sektion<br>5 Section   |   |   |   |   |   |   |   |   |   |
| <b>6S</b> | 6 Sektion<br>6 Section   |   |   |   |   |   |   |   |   |   |
| Pos. 2    | Einlassventil   Inlet relief   |   |   |   |   |   |   |   |   |   |
| <b>3</b>  | 63 bis 200 Bar, Standardeinstellung 120 Bar<br>63 to 200 Bar, standard setting 120 Bar                           |   |   |   |   |   |   |   |   |   |
| <b>4</b>  | 160 bis 315 Bar, Standardeinstellung 220 Bar<br>160 to 315 Bar, standard setting 220 Bar                         |   |   |   |   |   |   |   |   |   |
| <b>VS</b> | Verschlussstopfen<br>Blanking port   |   |   |   |   |   |   |   |   |   |
| Pos. 3*   | Schaltbilder   Spool options   |   |   |   |   |   |   |   |   |   |
| <b>1</b>  | 3 Positionen, doppeltwirkend, A-B geschlossen<br>3 Positions, double acting, A-B closed                          |   |   |   |   |   |   |   |   |   |
| <b>2</b>  | 3 Positionen, doppeltwirkend, A-B-T verbunden<br>3 Positions, double acting, A-B open to T                       |   |   |   |   |   |   |   |   |   |
| <b>3</b>  | 3 Positionen, einfachwirkend an A, A geschl., B verschl.<br>3 Positions, single action on A, A closed, B plugged |   |   |   |   |   |   |   |   |   |
| <b>4</b>  | 3 Positionen, einfachwirkend an B, B geschl., A verschl.<br>3 Positions, single action on B, B closed, A plugged |   |   |   |   |   |   |   |   |   |
| <b>5</b>  | 3 Positionen, doppeltwirkend, B-T verbunden, A-P geschl.<br>3 Positions, double acting, B open to T, A-P closed  |   |   |   |   |   |   |   |   |   |
| <b>6</b>  | 3 Positionen, doppeltwirkend, A-T verbunden, B-P geschl.<br>3 Positions, double acting, B open to T, A-P closed  |   |   |   |   |   |   |   |   |   |
| <b>9</b>  | 3 Positionen, doppeltwirkend, A-B-P-T geschlossen<br>3 Positions, double acting, A-B-P-T closed                  |   |   |   |   |   |   |   |   |   |
| <b>10</b> | 3 Positionen, doppeltwirkend, A-B-T verb., P geschl.<br>3 Positions, double acting, A-B open to T, P closed      |   |   |   |   |   |   |   |   |   |

|              |  |
|--------------|--|
| Pos. 4*      | Positionierer B   B Side spool positioners   |
| <b>6-1</b>   | 3 Positionen, Rastung in Pos. 1-0-2<br>3 Positions, detent in pos. 1-0-2                         |
| <b>6-2</b>   | 2 Positionen, Rastung in Pos. 0-2<br>2 Positions, detent in pos. 0-2                             |
| <b>6-3</b>   | 2 Positionen, Rastung in Pos. 1-0<br>2 Positions, detent in pos. 1-0                             |
| <b>8</b>     | 3 Pos., Federzentrierung zur Neutralstellung<br>3 Positions, spring return to neutral            |
| <b>8-1</b>   | 2 Pos., Federzentrierung zur Neutralstellung<br>2 Positions, spring return to neutral            |
| <b>8-2</b>   | 2 Pos., Federzentrierung zur Neutralstellung<br>2 Positions, spring return to neutral            |
| <b>9-1</b>   | 3 Positionen, Rastung in Pos. 1-2, Federzentr.<br>3 Positions, detent in pos. 1-2, spring center |
| <b>9-2</b>   | 3 Positionen, Rastung in Pos. 2, Federzentr.<br>3 Positions, detent in pos. 2, spring center     |
| <b>9-3</b>   | 3 Positionen, Rastung in Pos. 1, Federzentr.<br>3 Positions, detent in pos. 1, spring center     |
| Pos. 5*      | Positionierer A   A Side spool positioners   |
| <b>L</b>     | Standardhebel<br>Standard lever box  |
| <b>SPL</b>   | Staubschutzplatte, ohne Handhebel<br>With dust-proof plate                                       |
| <b>KV</b>    | Flexible Kabelverbindung<br>Flexible cable connection  |
| <b>LCB</b>   | Joystick<br>Joystick   |
| Pos. 6       | Anschluss   Port   |
| <b>G-4</b>   | G1/2<br>G1/2   |
| <b>SAE 8</b> | 3/4-16 UNF-2B<br>3/4-16 UNF-2B   |
| <b>M18</b>   | M18x1.5<br>M18x1.5   |

**\*Bei Bestellung ab 2 Sektionen bitte folgendes berücksichtigen:**

Wenn ein unterschiedlicher Aufbau der einzelnen Sektionen benötigt wird, muss Pos. 3 + Pos. 4 + Pos. 5 erneut angegeben werden!

**\*Please note for orders starting from 2 sections:**

If different sections needed, please indicate Pos. 3 Pos. + 4 + Pos. 5 again!



