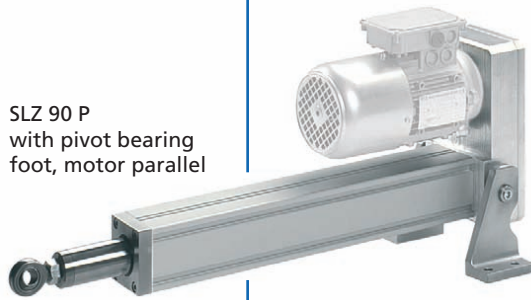


Heavy duty cylinder - SLZ 90

The powerful linear cylinder for precise positioning tasks up to 25,000 N



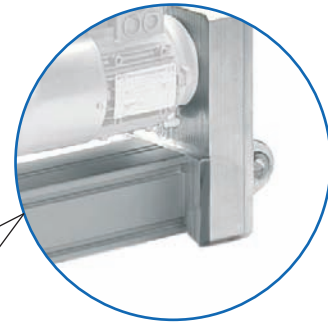
SLZ 90 S
with pivot bearing
foot, motor inline



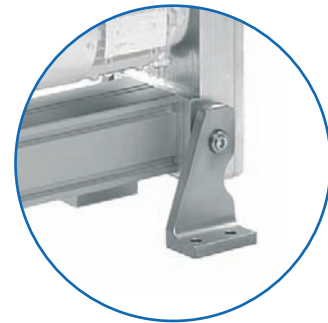
SLZ 90 P
with pivot bearing
foot, motor parallel



SLZ 90 W
with pivot bearing
foot, motor rightangle



SLZ 90 version
with fixing boss



SLZ 90 version
with pivot bearing foot



Drive options for SLZ 90

- ✓ 3-phase motor
- ✓ Servo motor

Features:

- Choice of drives (3-phase motor/servo motor)
- Flexible use of space due to different motor configurations
- Forces up to 25,000 N
- Speeds up to 933 mm/s
- 100% duty cycle
- Coverable slot geometry on both sides supports a range of fixing options for attachments
- Push rod with rotation locking
- Travel up to 2000 mm
- Maintenance-free for entire lifetime of unit
- IP 54
- Internal magnets for external magnetic switches

Options:

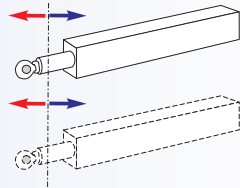
- Optional IP 65 can be supplied
- Servo motors and controls available on request
- Special stroke lengths available on request
- Motor brake

SLZ 90 Electric cylinder - Table of contents

Properties/Technical data

- General information/operating conditions... 548

Versions
(Dimensions, order numbers)



- SLZ 90 electric cylinder with pivot bearing foot and fixing boss:

SLZ 90 S 550 - 551

SLZ 90 P 552 - 554

SLZ 90 W 556 - 558

Accessories

Fixing

- Slot stone -R- 559

Position determination

- Magnetic switch 559

SLZ 90 – Technical data

General information/operating conditions

| Type | SLZ 90 with ball screw for precise positioning/control | | |
|---|--|----------|----------|
| | SLZ 90 S | SLZ 90 P | SLZ 90 W |
| Compressive force/tensile force | 25,000 N | 25,000 N | 25,000 N |
| Self-locking (via motor brake) | 25,000 N | 25,000 N | 25,000 N |
| Max. speed | 933 mm/s | 933 mm/s | 126 mm/s |
| Design | Linear cylinder with ball screw 25 x 5, 25 x 10, 25 x 25, 32 x 5, 32 x 10, 32 x 40 | | |
| Guide | Double bearing provided by slide bushes | | |
| Installation position | Any position, without shear forces | | |
| Ambient temperature | -20°C to +70°C | | |
| Repeatability | ± 0.05 mm | | |
| Duty cycle (at max. load) | 100% | | |
| Voltage | 230/400 V AC | | |
| Current consumption (max. starting current) | depending on motor selection | | |
| Power input | depending on motor selection, up to 1.5 KW | | |
| Protection class | IP 54 (optional IP 65) | | |

The data refers to a three-phase motor 230/400 V AC, 50 Hz;
different performance data available on request.

Connecting slots - guide profile



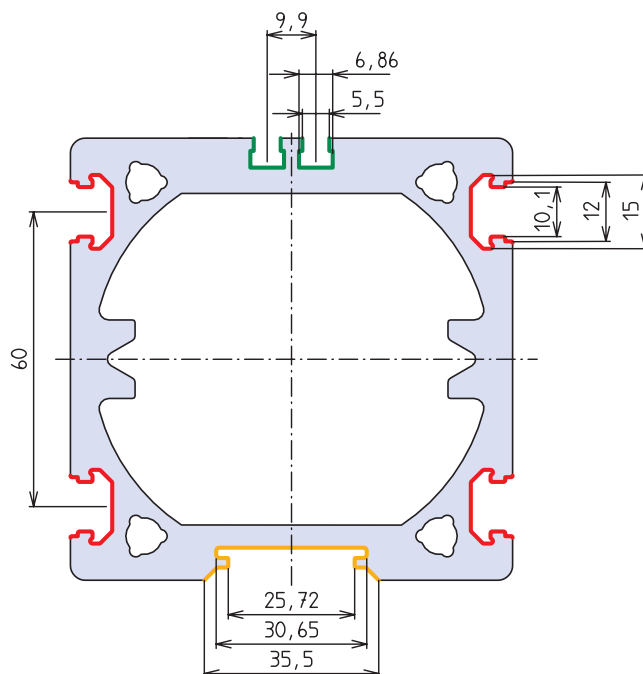
Slot for magnetic switch, see page 559



Slot for accessory attachment
(30 BLOCAN® slot geometry)



Slot for fixing a position transducer
(available on request)





Adjustment of maintenance platform via SLZ 90 heavy duty cylinders.

SLZ 90 S - Versions

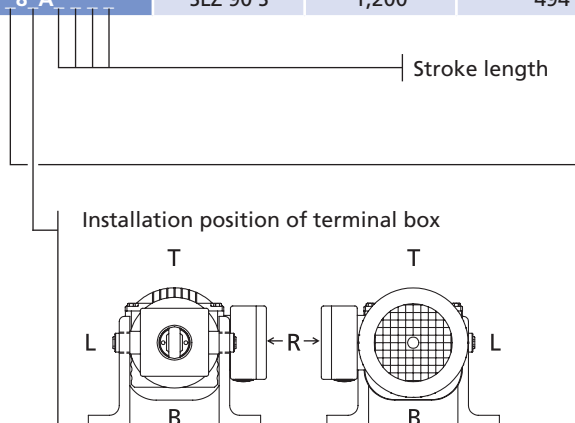
Order information:

- Longer stroke lengths on request
- Other performance data and motors available on request



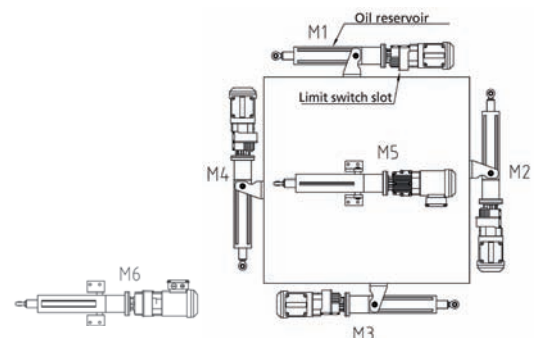
SLZ 90 S versions with ball screw

| Code No. | Type | Max. force F [N] | Max. speed [mm/s] | Max. stroke [mm] | Output [kW] | Motor selection with motor brake |
|---------------------------|----------|------------------|-------------------|------------------|-------------|----------------------------------|
| Ball screw 25 x 5 | | | | | | |
| TQ21A1S2C_3_A_ ___ | SLZ 90 S | 6,500 | 115 | 800 | 1.1 | 80-4/BMG |
| TQ21A1S2K_3_A_ ___ | SLZ 90 S | 13,000 | 38 | 900 | 0.75 | RF17DRS80S2/BE |
| TQ21A1S2X_3_A_ ___ | SLZ 90 S | 14,000 | 13 | 900 | 0.37 | RF17DRS71S4/BE |
| TQ21A1S2R_3_A_ ___ | SLZ 90 S | 14,000 | 21 | 900 | 0.55 | RF17DRS71M2/BE |
| TQ21A1S2E_3_A_ ___ | SLZ 90 S | 14,000 | 52 | 900 | 1.1 | RF17DRS80M2/BE |
| Ball screw 25 x 10 | | | | | | |
| TQ21A1S2B_4_A_ ___ | SLZ 90 S | 3,500 | 233 | 800 | 1.5 | 80-4/BMG |
| TQ21A1S2E_4_A_ ___ | SLZ 90 S | 7,000 | 105 | 1,300 | 1.1 | RF17DRS80M2/BE |
| TQ21A1S2M_4_A_ ___ | SLZ 90 S | 9,000 | 52 | 1,200 | 0.75 | RF17DRS80S4/BE |
| TQ21A1S2S_4_A_ ___ | SLZ 90 S | 13,000 | 30 | 1,000 | 0.55 | RF17DRS71M4/BE |
| Ball screw 25 x 25 | | | | | | |
| TQ21A1S2C_5_A_ ___ | SLZ 90 S | 1,500 | 583 | 800 | 1.1 | 80-4/BMG |
| TQ21A1S2F_5_A_ ___ | SLZ 90 S | 1,800 | 308 | 1,000 | 1.1 | RF17DRS80M2/BE |
| Ball screw 32 x 5 | | | | | | |
| TQ21A1S2B_6_A_ ___ | SLZ 90 S | 8,000 | 116 | 1,000 | 1.5 | 80-4/BMG |
| TQ21A1S2E_6_A_ ___ | SLZ 90 S | 12,000 | 52 | 1,900 | 1.1 | RF17DRS80M2/BE |
| TQ21A1S2X_6_A_ ___ | SLZ 90 S | 18,000 | 13 | 1,300 | 0.37 | RF17DRS71S4/BE |
| TQ21A1S2M_6_A_ ___ | SLZ 90 S | 18,000 | 26 | 1,300 | 0.75 | RF17DRS80S4/BE |
| Ball screw 32 x 10 | | | | | | |
| TQ21A1S2B_7_A_ ___ | SLZ 90 S | 3,500 | 233 | 1,000 | 1.5 | 80-4/BMG |
| TQ21A1S2E_7_A_ ___ | SLZ 90 S | 7,000 | 105 | 1,900 | 1.1 | RF17DRS80M2/BE |
| TQ21A1S2M_7_A_ ___ | SLZ 90 S | 9,000 | 52 | 1,800 | 0.75 | RF17DRS80S4/BE |
| TQ21A1S2N_7_A_ ___ | SLZ 90 S | 18,000 | 27 | 1,300 | 0.75 | RF17DRS80S4/BE |
| TQ21A1S2U_7_A_ ___ | SLZ 90 S | 25,000 | 17 | 1,100 | 0.55 | RF17DRS71M4/BE |
| Ball screw 32 x 40 | | | | | | |
| TQ21A1S2B_8_A_ ___ | SLZ 90 S | 1,000 | 933 | 900 | 1.5 | 80-4/BMG |
| TQ21A1S2F_8_A_ ___ | SLZ 90 S | 1,200 | 494 | 1,200 | 1.1 | RF17DRS80M2/BE |

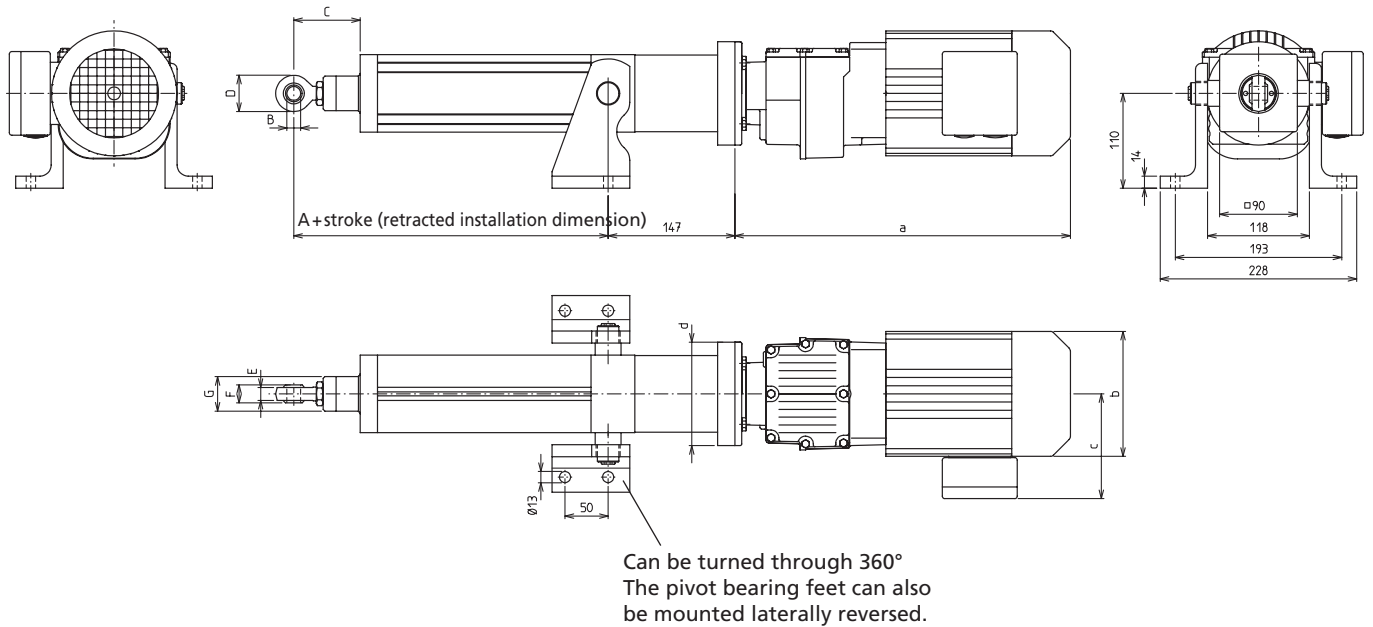


All diagrams show the terminal box in the R position

- 1 = M1
- 2 = M2
- 3 = M3
- 4 = M4
- 5 = M5
- 6 = M6



Version with pivot bearing feet



[mm]

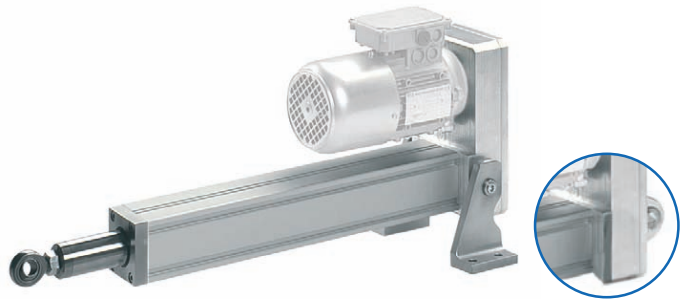
| 3-phase motors | a | b | c | d | Weight [kg] |
|----------------|-----|-------|-----|-------|-------------|
| RF17DRS71/BE | 428 | Ø 139 | 129 | Ø 120 | 12 |
| RF17DRS80/BE | 428 | Ø 156 | 139 | Ø 120 | 14 |
| 80-4/BMG | 306 | Ø 156 | 131 | Ø 120 | 13 |

| Type | A | B | C | D | E | F | G | Weight [kg] | |
|-----------------------------|-----|------|----|----|----|----|------|----------------------------|--------------------------|
| | | | | | | | | Basic length (dimension A) | Additional weight/100 mm |
| KG 25 x 5, 25 x 10, 25 x 25 | 265 | Ø 16 | 78 | 42 | 15 | 21 | Ø 40 | 11.6 | 1.5 |
| KG 32 x 5, 32 x 10, 32 x 40 | 294 | Ø 20 | 86 | 50 | 18 | 25 | Ø 50 | 12.8 | 1.9 |

SLZ 90 P - Versions

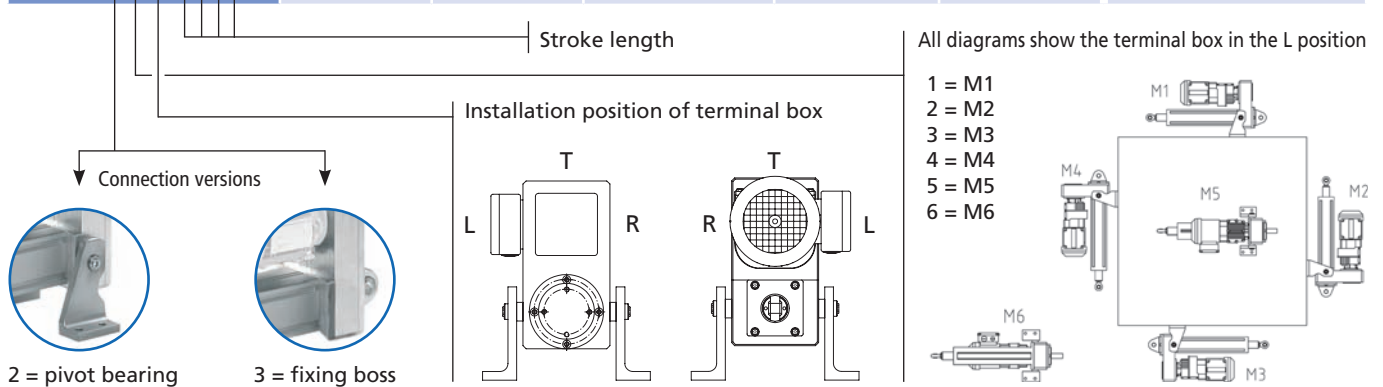
Order information:

- Longer stroke lengths on request
- Other performance data and motors available on request

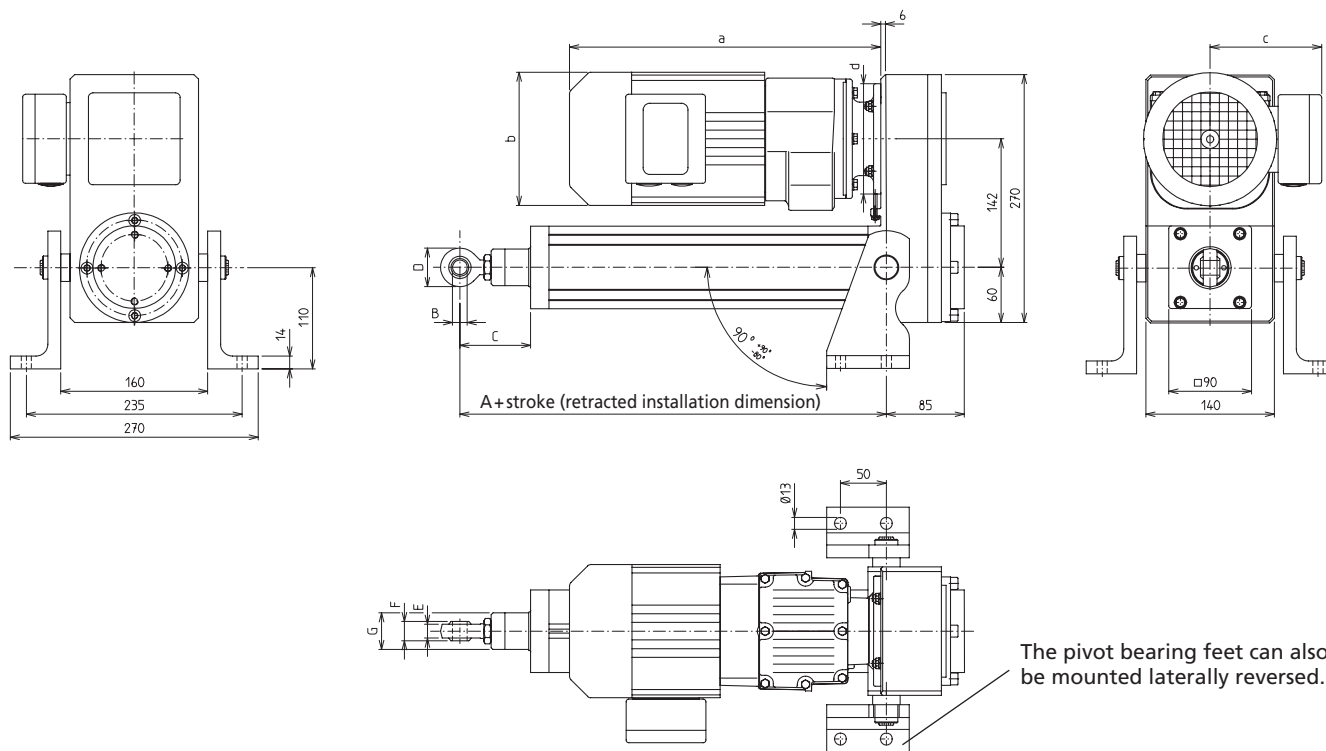


SLZ 90 P versions with ball screw drive

| Code No. | Type | Max. force F [N] | Max. speed [mm/s] | Max. stroke [mm] | Output [kW] | Motor selection with motor brake |
|---------------------------|----------|------------------|-------------------|------------------|-------------|----------------------------------|
| Ball screw 25 x 5 | | | | | | |
| TQ21A1P_C_3_A_ | SLZ 90 P | 6,500 | 115 | 800 | 1.1 | 80-4/BMG |
| TQ21A1P_K_3_A_ | SLZ 90 P | 13,000 | 38 | 900 | 0.75 | RF17DRS80S2/BE |
| TQ21A1P_X_3_A_ | SLZ 90 P | 14,000 | 13 | 900 | 0.37 | RF17DRS71S4/BE |
| TQ21A1P_R_3_A_ | SLZ 90 P | 14,000 | 21 | 900 | 0.55 | RF17DRS71M2/BE |
| TQ21A1P_E_3_A_ | SLZ 90 P | 14,000 | 52 | 900 | 1.1 | RF17DRS80M2/BE |
| Ball screw 25 x 10 | | | | | | |
| TQ21A1P_B_4_A_ | SLZ 90 P | 3,500 | 233 | 800 | 1.5 | 80-4/BMG |
| TQ21A1P_E_4_A_ | SLZ 90 P | 7,000 | 105 | 1,300 | 1.1 | RF17DRS80M2/BE |
| TQ21A1P_M_4_A_ | SLZ 90 P | 9,000 | 52 | 1,200 | 0.75 | RF17DRS80S4/BE |
| TQ21A1P_S_4_A_ | SLZ 90 P | 13,000 | 30 | 900 | 0.55 | RF17DRS71M4/BE |
| Ball screw 25 x 25 | | | | | | |
| TQ21A1P_C_5_A_ | SLZ 90 P | 1,500 | 583 | 800 | 1.1 | 80-4/BMG |
| TQ21A1P_F_5_A_ | SLZ 90 P | 1,800 | 308 | 1,000 | 1.1 | RF17DRS80M2/BE |
| Ball screw 32 x 5 | | | | | | |
| TQ21A1P_B_6_A_ | SLZ 90 P | 8,000 | 116 | 800 | 1.5 | 80-4/BMG |
| TQ21A1P_E_6_A_ | SLZ 90 P | 12,000 | 52 | 1,500 | 1.1 | RF17DRS80M2/BE |
| TQ21A1P_X_6_A_ | SLZ 90 P | 18,000 | 13 | 1,300 | 0.37 | RF17DRS71S4/BE |
| TQ21A1P_M_6_A_ | SLZ 90 P | 18,000 | 26 | 1,300 | 0.75 | RF17DRS80S4/BE |
| Ball screw 32 x 10 | | | | | | |
| TQ21A1P_B_7_A_ | SLZ 90 P | 3,500 | 233 | 1,000 | 1.5 | 80-4/BMG |
| TQ21A1P_E_7_A_ | SLZ 90 P | 7,000 | 105 | 1,900 | 1.1 | RF17DRS80M2/BE |
| TQ21A1P_M_7_A_ | SLZ 90 P | 9,000 | 52 | 1,800 | 0.75 | RF17DRS80S4/BE |
| TQ21A1P_N_7_A_ | SLZ 90 P | 18,000 | 27 | 1,300 | 0.75 | RF17DRS80S4/BE |
| TQ21A1P_U_7_A_ | SLZ 90 P | 25,000 | 17 | 1,100 | 0.55 | RF17DRS71M4/BE |
| Ball screw 32 x 40 | | | | | | |
| TQ21A1P_B_8_A_ | SLZ 90 P | 1,000 | 933 | 900 | 1.5 | 80-4/BMG |
| TQ21A1P_F_8_A_ | SLZ 90 P | 1,200 | 494 | 1,200 | 1.1 | RF17DRS80M2/BE |



Version with pivot bearing feet



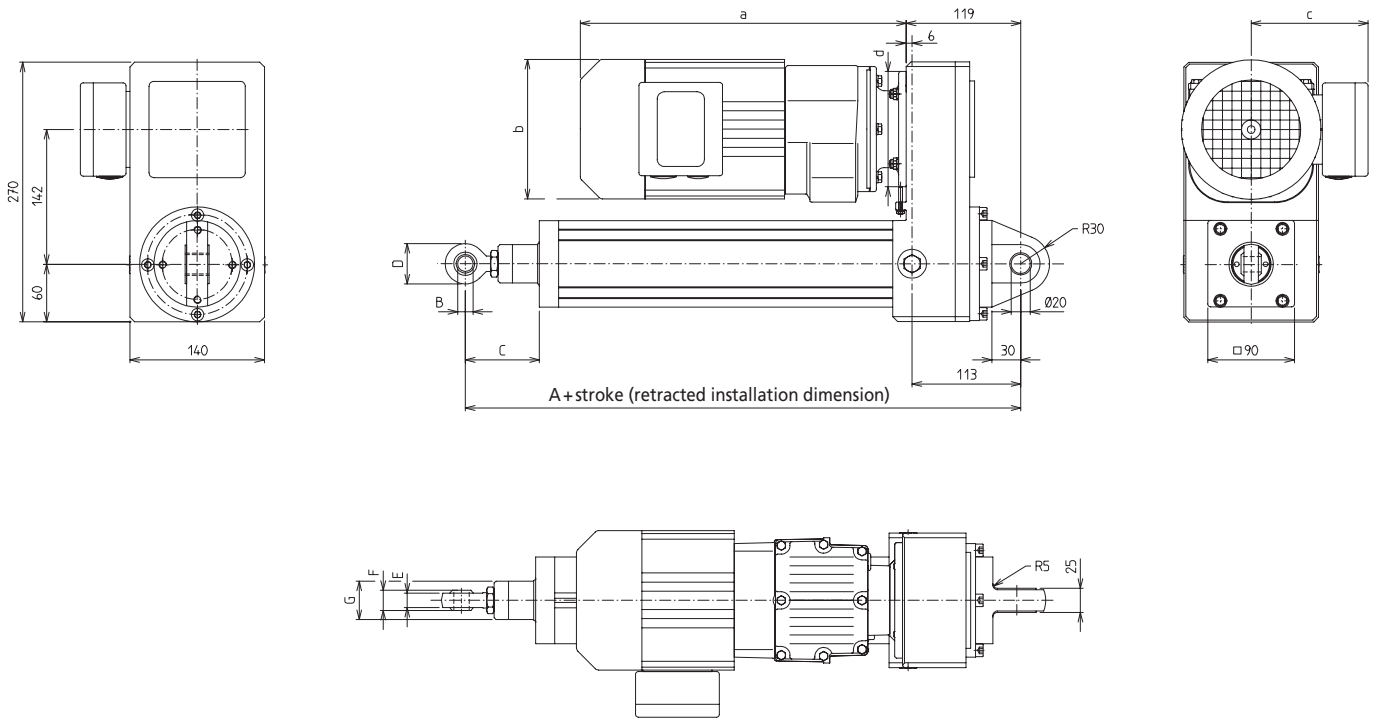
[mm]

| 3-phase motors | a | b | c | d | Weight [kg] |
|----------------|-----|-------|-----|-------|-------------|
| RF17DRS71/BE | 428 | Ø 139 | 129 | Ø 120 | 12 |
| RF17DRS80/BE | 428 | Ø 156 | 139 | Ø 120 | 14 |
| 80-4/BMG | 306 | Ø 156 | 131 | Ø 120 | 13 |

| Type | A | B | C | D | E | F | G | Weight [kg] | |
|-----------------------------|-----|------|-----|----|----|----|------|----------------------------|---------------------------|
| | | | | | | | | Basic length (dimension A) | Additional weight/ 100 mm |
| KG 25 x 5, 25 x 10, 25 x 25 | 265 | Ø 16 | 78 | 42 | 15 | 21 | Ø 40 | 13.0 | 1.5 |
| KG 32 x 5, 32 x 10, 32 x 40 | 294 | Ø 20 | 113 | 50 | 18 | 25 | Ø 50 | 13.1 | 1.9 |

SLZ 90 P - Versions

Version with fixing boss



[mm]

| 3-phase motors | a | b | c | d | Weight [kg] |
|----------------|-----|-------|-----|-------|-------------|
| RF17DRS71/BE | 428 | Ø 139 | 129 | Ø 120 | 12 |
| RF17DRS80/BE | 428 | Ø 156 | 139 | Ø 120 | 14 |

| Type | A | B | C | D | E | F | G | Weight [kg] | |
|-----------------------------|-----|------|----|----|----|----|------|----------------------------|--------------------------|
| | | | | | | | | Basic length (dimension A) | Additional weight/100 mm |
| KG 25 x 5, 25 x 10, 25 x 25 | 378 | Ø 16 | 78 | 42 | 15 | 21 | Ø 40 | 11.2 | 1.5 |
| KG 32 x 5, 32 x 10, 32 x 40 | 410 | Ø 20 | 86 | 50 | 18 | 25 | Ø 50 | 12.0 | 1.9 |

SLZ 90 W - Versions

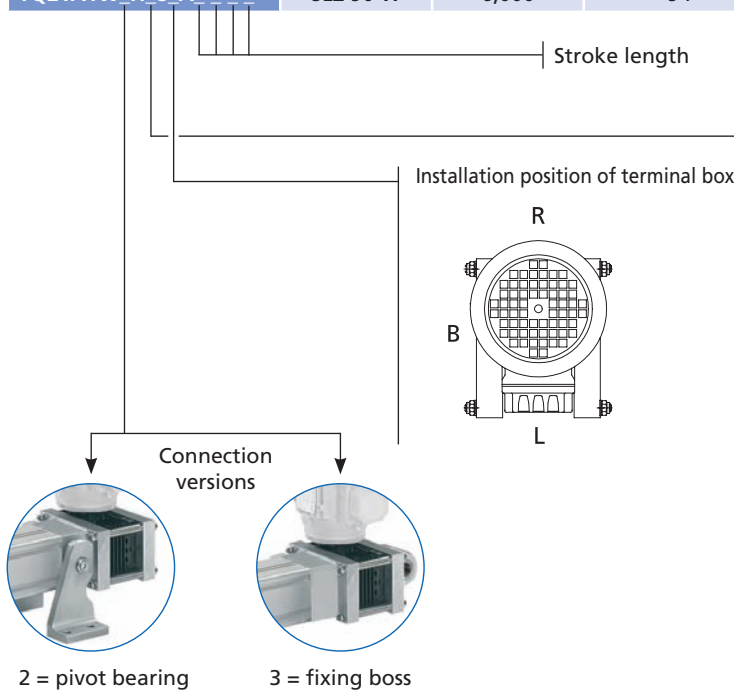
Order information:

- Longer stroke lengths on request
- Other performance data and motors available on request

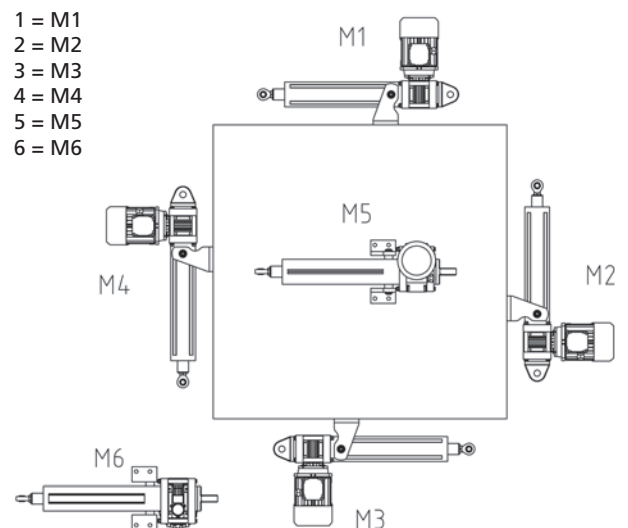


SLZ 90 W versions with ball screw drive

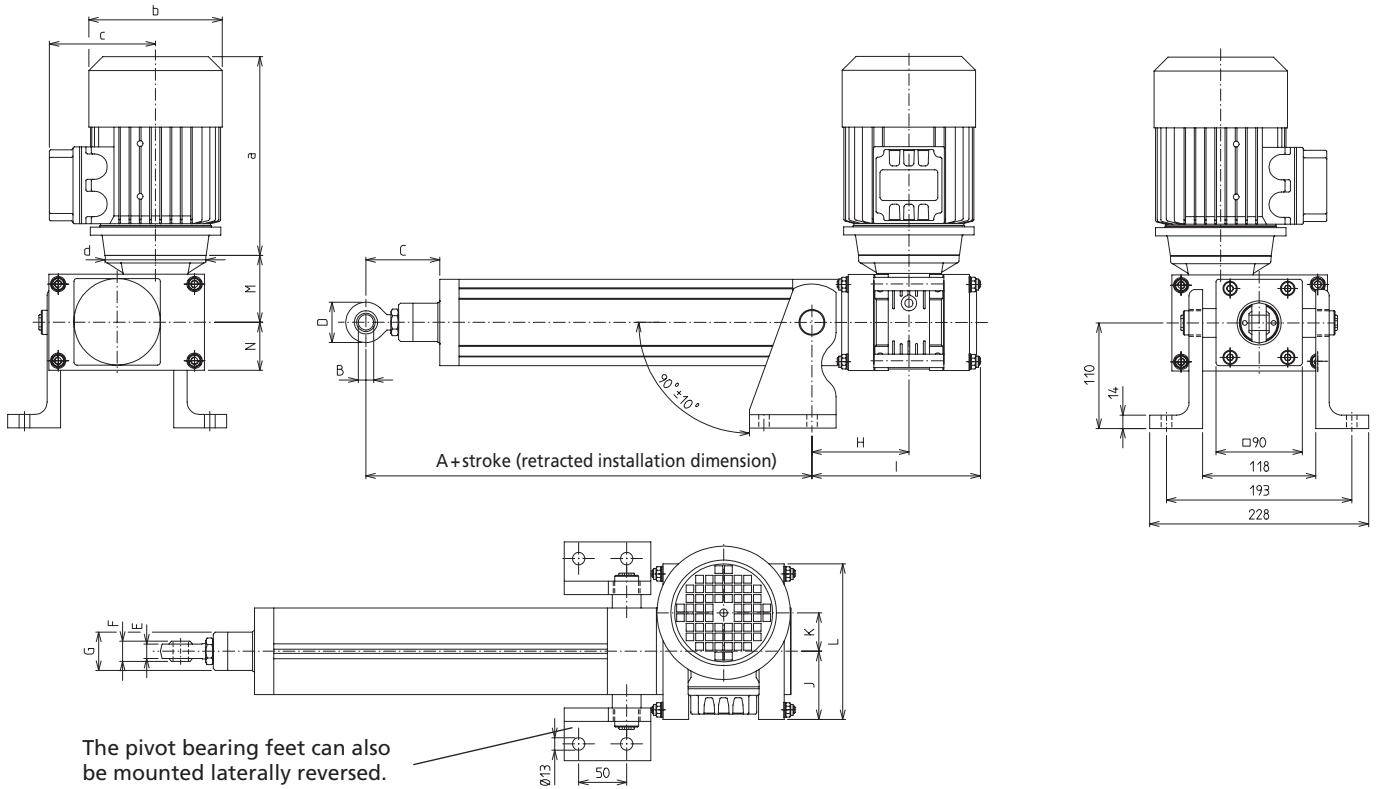
| Code No. | Type | Max. force F [N] | Max. speed [mm/s] | Max. stroke [mm] | Output [kW] | Motor selection with motor brake |
|---------------------------|----------|------------------|-------------------|------------------|-------------|----------------------------------|
| Ball screw 25 x 10 | | | | | | |
| TQ21A1W_P_4_A_--- | SLZ 90 W | 5,000 | 45 | 1,500 | 0.37 | 71-4/BMG |
| TQ21A1W_Q_4_A_--- | SLZ 90 W | 8,000 | 30 | 1,200 | 0.37 | 71-4/BMG |
| TQ21A1W_R_4_A_--- | SLZ 90 W | 10,000 | 22 | 1,100 | 0.37 | 71-4/BMG |
| TQ21A1W_Y_4_A_--- | SLZ 90 W | 13,000 | 10 | 1,000 | 0.25 | 63-4/BMG |
| TQ21A1W_S_4_A_--- | SLZ 90 W | 15,000 | 15 | 900 | 0.37 | 71-4/BMG |
| Ball screw 25 x 25 | | | | | | |
| TQ21A1W_P_5_A_--- | SLZ 90 W | 2,000 | 113 | 2,000 | 0.37 | 71-4/BMG |
| TQ21A1W_Q_5_A_--- | SLZ 90 W | 4,000 | 75 | 1,800 | 0.37 | 71-4/BMG |
| Ball screw 32 x 10 | | | | | | |
| TQ21A1W_H_7_A_--- | SLZ 90 W | 22,000 | 23 | 1,100 | 0.75 | 80-4/BMG |
| TQ21A1W_U_7_A_--- | SLZ 90 W | 24,000 | 15 | 1,100 | 0.55 | 71-4/BMG |
| TQ21A1W_C_7_A_--- | SLZ 90 W | 25,000 | 30 | 1,100 | 1.1 | 80-4/BMG |
| Ball screw 32 x 40 | | | | | | |
| TQ21A1W_C_8_A_--- | SLZ 90 W | 6,000 | 126 | 1,600 | 1.1 | 80-4/BMG |
| TQ21A1W_H_8_A_--- | SLZ 90 W | 6,000 | 94 | 1,600 | 0.75 | 80-4/BMG |



All diagrams show the terminal box in the L position



Version with pivot bearing feet



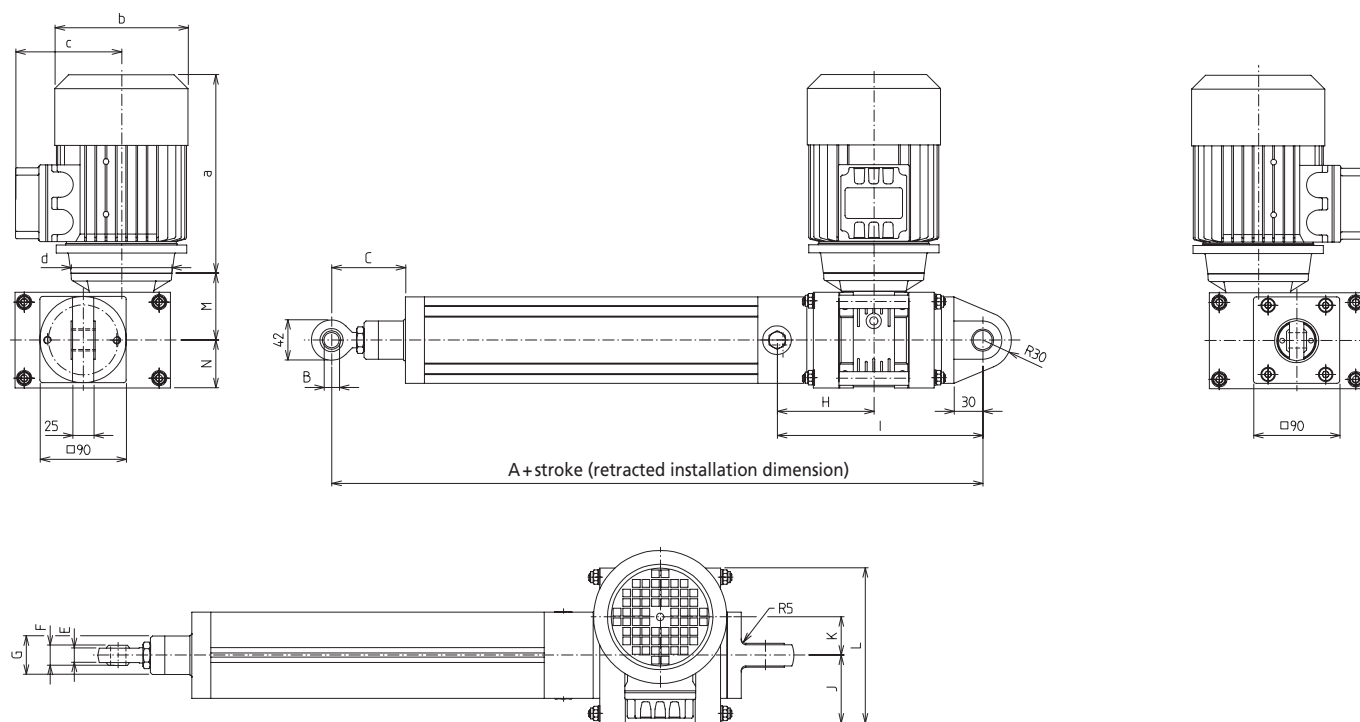
[mm]

| 3-phase motors | a | b | c | d | Weight [kg] |
|----------------|-----|-------|-----|-------|-------------|
| 63-4/BMG | 246 | Ø 124 | 109 | Ø 124 | 8 |
| 71-4/BMG | 278 | Ø 140 | 117 | Ø 105 | 10 |
| 80-4/BMG | 306 | Ø 156 | 131 | Ø 120 | 12 |

| Type | A | B | C | D | E | F | G | H | I | J | K | L | M | N | Weight [kg] | |
|---------------------|-----|------|----|----|----|----|------|-------|-----|----|----|-------|-----|----|----------------------------|---------------------------|
| | | | | | | | | | | | | | | | Basic length (dimension A) | Additional weight/ 100 mm |
| KG 25 x 10, 25 x 25 | 265 | Ø 16 | 78 | 42 | 15 | 21 | Ø 40 | 101.5 | 176 | 71 | 40 | 162 | 70 | 50 | 14.8 | 1.5 |
| KG 32 x 10, 32 x 40 | 294 | Ø 20 | 86 | 50 | 18 | 25 | Ø 50 | 117.5 | 212 | 98 | 63 | 231.5 | 109 | 72 | 22.5 | 1.9 |

SLZ 90 W – Fixing/Position determination

Version with fixing boss



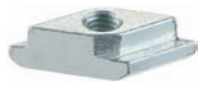
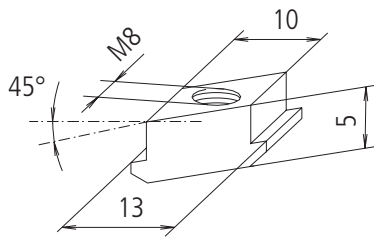
[mm]

| 3-phase motors | a | b | c | d | Weight [kg] |
|----------------|-----|-------|-----|-------|-------------|
| 63-4/BMG | 246 | Ø 121 | 104 | Ø 90 | 8 |
| 71-4/BMG | 273 | Ø 139 | 112 | Ø 105 | 10 |
| 80-4/BMG | 304 | Ø 158 | 122 | Ø 120 | 12 |

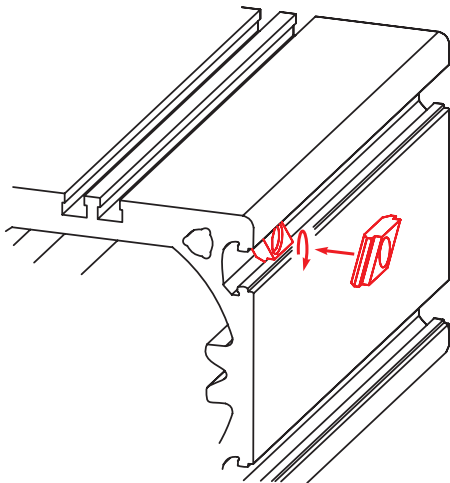
| Type | A | B | C | D | E | F | G | H | I | J | K | L | M | N | Weight [kg] | |
|---------------------|-----|------|----|----|----|----|------|-------|-----|----|----|-------|-----|----|----------------------------|--------------------------|
| | | | | | | | | | | | | | | | Basic length (dimension A) | Additional weight/100 mm |
| KG 25 x 10, 25 x 25 | 265 | Ø 16 | 78 | 42 | 15 | 21 | Ø 40 | 101.5 | 176 | 71 | 40 | 162 | 70 | 50 | 14.8 | 1.5 |
| KG 32 x 10, 32 x 40 | 294 | Ø 20 | 86 | 50 | 18 | 25 | Ø 50 | 117.5 | 212 | 98 | 63 | 231.5 | 109 | 72 | 22.5 | 1.9 |

SLZ 90 - Fixing/Position determination
Slot stone -R-

- Slot stones facilitate the fitting of attachments to the cylinder.
- To this end, they can be swivelled into the slot from above (Type -R-).



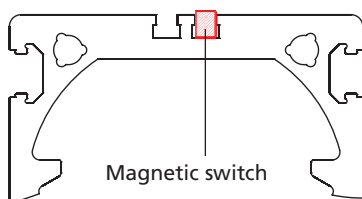
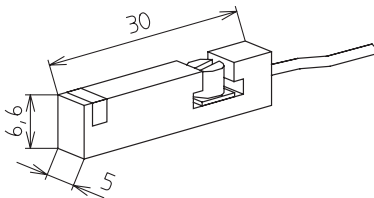
Type -R-



| Code No. | Type | F [N] |
|----------|-------------------|-------|
| 4006223 | Slot stone -R- M8 | 4,000 |

Magnetic switch

- Signals from the magnetic switch can be collected and evaluated by a customer-provided control unit (such as a PLC).
- The switch can be retrofitted in the lateral slot (protected by a cover profile as standard)



Magnetic switch

| Code No. | Type |
|-----------|--|
| qzd050334 | Magnetic switch, NC contact*, cable length 5.3 m |

*Magnetic switch, NO contact, available on request

Magnetic switch – Technical data

| | |
|---------------------|-----------------|
| | NC contact |
| Voltage | 10-30 V DC |
| Current consumption | < 10 mA |
| Output current | Max. 100 mA |
| Output type | PNP |
| Function indication | LED |
| Ambient temperature | -25°C to + 85°C |
| Protection class | IP 67 |