



## Length Calculation – protective tube SRO, translating version S

(The length calculation is identical for Z and GSZ)

| GSZ-2 to Z-150:                              |        | GSZ-2 | Z-5      | Z-10      | Z-25      | Z-35 | Z-50      | Z-50/Tr50 | Z-100     | Z-150     |
|--|--------|-------|----------|-----------|-----------|------|-----------|-----------|-----------|-----------|
| Tr basic length <sup>1)</sup>                | Tr     | 47    | 46       | 49        | 53        | 57   | 62        | 62        | 82        | 87        |
| KGT basic length <sup>1)</sup>               | KGT    | –     | 16x05 56 | 25x05 59  | 32x05 63  | –    | 40x05 72  | –         | 50x10 82  | 63x10 87  |
|  |        | –     | 16x10 76 | 25x10 79  | 32x10 73  | –    | 40x10 72  | –         | 50x20 122 | 63x20 127 |
|  |        | –     | –        | 25x25 149 | 32x20 103 | –    | 40x20 102 | –         | 50x40 202 | 63x40 207 |
|  |        | –     | –        | 25x50 279 | 32x40 173 | –    | 40x40 162 | –         | –         | 63x60 287 |
| Escape/rotation protection AS/VS             | Tr/KGT | 15    | 15       | 20        | 20        | 30   | 30        | 30        | 30        | 30        |
| Limit switch ES <sup>3)</sup>                | Tr     | 70    | 73       | 72        | 72        | 86   | 82        | 82        | 62        | 62        |
| ES <sup>3)</sup> and pivot bearing plate KAR | Tr     | 92    | 94       | 92        | 96        | 112  | 107       | 107       | 107       | 112       |
| Limit switch ES <sup>3)</sup>                | KGT    | –     | 16x05 63 | 25x05 62  | 32x05 62  | –    | 40x05 72  | –         | 50x10 62  | 63x10 62  |
|  |        | –     | 16x10 43 | 25x10 42  | 32x10 52  | –    | 40x10 72  | –         | 50x20 30  | 63x20 30  |
|  |        | –     | –        | 25x25 20  | 32x20 22  | –    | 40x20 42  | –         | 50x40 30  | 63x40 30  |
|  |        | –     | –        | 25x50 20  | 32x40 20  | –    | 40x40 30  | –         | –         | 63x60 30  |
| ES <sup>3)</sup> and pivot bearing plate KAR | KGT    | –     | 16x05 84 | 25x05 82  | 32x05 86  | –    | 40x05 97  | –         | 50x10 107 | 63x10 112 |
|  |        | –     | 16x10 64 | 25x10 72  | 32x10 76  | –    | 40x10 97  | –         | 50x20 70  | 63x20 75  |
|  |        | –     | –        | 25x25 20  | 32x20 46  | –    | 40x20 67  | –         | 50x40 30  | 63x40 35  |
|  |        | –     | –        | 25x50 20  | 32x40 20  | –    | 40x40 30  | –         | –         | 63x60 30  |

| Z-250 to Z-1000 <sup>4)</sup> :  |        | Z-250     | Z-350      | Z-500      | Z-750      | Z-1000     |
|----------------------------------|--------|-----------|------------|------------|------------|------------|
| Tr basic length <sup>1)</sup>    | Tr     | 92        | 107        | 157        | 157        | 157        |
| KGT basic length <sup>1)</sup>   | KGT    | 80x10 92  | 100x20 147 | 125x25 177 | 140x25 177 | 160x25 177 |
|                                  |        | 80x20 132 | 100x40 227 | 125x40 237 | 140x40 237 | 160x40 237 |
|                                  |        | 80x40 212 | 100x60 307 | 125x60 317 | 140x60 317 | 160x60 317 |
|                                  |        | 80x60 292 | 100x80 387 | 125x80 397 | 140x80 397 | 160x80 397 |
| Escape/rotation protection AS/VS | Tr/KGT | 30        | 35         | 40         | 40         | 40         |
| Limit switch ES <sup>3)</sup>    | Tr     | 58        | 59         | 40         | 48         | 48         |
| Limit switch ES <sup>3)</sup>    | KGT    | 80x10 58  | 100x20 35  | 125x25 40  | 140x25 40  | 160x25 40  |
|                                  |        | 80x20 30  | 100x40 35  | 125x40 40  | 140x40 40  | 160x40 40  |
|                                  |        | 80x40 30  | 100x60 35  | 125x60 40  | 140x60 40  | 160x60 40  |
|                                  |        | 80x60 30  | 100x80 35  | 125x80 40  | 140x80 40  | 160x80 40  |

CAUTION: minimum stroke with limit switch ES<sup>2)</sup>:

| GSZ-2 to Z-150:                                 | GSZ-2 | Z-5 | Z-10 | Z-25 | Z-35 | Z-50 | Z-50/Tr50 | Z-100 | Z-150 |
|---|-------|-----|------|------|------|------|-----------|-------|-------|
| minimum stroke with limit switch ES             | 53    | 50  | 51   | 51   | 41   | 42   | 42        | 42    | 42    |
| minimum stroke with ES and lubrication strip SL | 123   | 120 | 121  | 121  | 111  | 112  | 112       | 112   | 112   |

| Z-250 to Z-1000:                                | Z-250 | Z-350 | Z-500 | Z-750 | Z-1000 |
|---|-------|-------|-------|-------|--------|
| minimum stroke with limit switch ES             | 47    | 42    | 46    | 46    | 46     |
| minimum stroke with ES and lubrication strip SL | 117   | 112   | 116   | 116   | 116    |

- 1) Basic length of the protective tube without a cap.  
The cap height is 5 mm.
- 2) If a shorter stroke than specified is required, the limit switches and lubrication strip may be fitted on different faces.
- 3) Limit switches ES are always used in combination with rotation protection VS (VS is included in the extension).
- 4) Z-250 - Z-1000:
  - only screw, or screw with escape protection AS (round protective tube)
  - with rotation protection VS or VS + limit switch ES (square protective tube)