



- Large temperature range of use
- Large inner connection chamber
- Plastic Ex e enclosure
- Degree of protection IP66/67
- Five different contact versions
- Different actuator versions which can be repositioned by 4 x 90°
- Can also be used as simple apparatus

E4

MY R. STAHL 8070C



Position switches are used to position, control and monitor the moving parts on machines and systems. Because they meet the requirements of the EN 50 041 and IEC 60947-5-1 product standards, they can also be used as a position switch with a safety function. Series 8070/2 position switches are approved for use in hazardous areas of Zones 1, 2, 21 and 22.

In conjunction with a safety door guard and the corresponding circuitry, the PL position switches fulfil the requirements of “e” in accordance with EN ISO 13849-1, or up to SIL 3 in accordance with EN 62061. They are identified with the ⊕ character to signify positive opening. There are snap- and slow-action versions with different types of contacts as well as with a variety of different actuating elements.

| | IECEx / ATEX | | | | | |
|-----------------|--------------|---|---|----|----|----|
| Zone | 0 | 1 | 2 | 20 | 21 | 22 |
| Installation in | | • | • | | • | • |

| Selection Table | | | | | | |
|-----------------|-------------|----------------------------------|----------------------------|------------------|----------|--------|
| Actuator | | Adjustable rotary lever | | | | |
| Figure | Contacts | Switching function | Positive opening operation | Product Type | Art. No. | Weight |
| | 1 NC + 1 NO | Slow-action contact | No | 8070/2-1-DS-U60 | 275363 | 256 g |
| | | Slow-action contact, Overlapping | No | 8070/2-5-DS-U60 | 275367 | 167 g |
| | | Snap-action contact | No | 8070/2-2-DS-U60 | 275364 | 256 g |
| | 2 NC | Slow-action contact | No | 8070/2-3-DS-U60 | 275365 | 256 g |
| | 2 NO | Slow-action contact | No | 8070/2-3-DS-U60 | 275366 | 167 g |
| Actuator | | Parallel roller lever | | | | |
| Figure | Contacts | Switching function | Positive opening operation | Product Type | Art. No. | Weight |
| | 1 NC + 1 NO | Slow-action contact | Yes | 8070/2-1-WPH-U60 | 258222 | 170 g |
| | | Snap-action contact | Yes | 8070/2-2-WPH-U60 | 258230 | 170 g |
| | | Snap-action contact | No | 8070/2-5-WPH-U60 | 268114 | 167 g |
| | 2 NC | Slow-action contact | Yes | 8070/2-3-WPH-U60 | 268111 | 167 g |

Selection Table

| Actuator | | Plunger | | | | |
|----------|-------------|----------------------------------|----------------------------|-----------------|----------|--------|
| Figure | Contacts | Switching function | Positive opening operation | Product Type | Art. No. | Weight |
| | 1 NC + 1 NO | Slow-action contact | Yes | 8070/2-1-W-U60 | 258219 | 167 g |
| | | Slow-action contact, Overlapping | Yes | 8070/2-5-W-U60 | 258243 | 167 g |
| | | Snap-action contact | Yes | 8070/2-2-W-U60 | 258227 | 167 g |
| | 2 NC | Slow-action contact | Yes | 8070/2-3-W-U60 | 258235 | 167 g |
| | 2 NO | Slow-action contact | No | 8070/2-4-W-U60 | 268432 | 167 g |
| Actuator | | Rod lever | | | | |
| Figure | Contacts | Switching function | Positive opening operation | Product Type | Art. No. | Weight |
| | 1 NC + 1 NO | Slow-action contact | No | 8070/2-1-DD-U60 | 275068 | 242 g |
| | | Slow-action contact, Overlapping | No | 8070/2-5-DD-U60 | 275362 | 242 g |
| | | Snap-action contact | No | 8070/2-2-DD-U60 | 258233 | 242 g |
| | | Snap-action contact | No | 8070/2-2-DD-U60 | 275069 | 242 g |
| | 2 NC | Slow-action contact | No | 8070/2-3-DD-U60 | 275070 | 242 g |
| | 2 NO | Slow-action contact | No | 8070/2-4-DD-U60 | 275361 | 167 g |
| Actuator | | Roller lever | | | | |
| Figure | Contacts | Switching function | Positive opening operation | Product Type | Art. No. | Weight |
| | 1 NC + 1 NO | Slow-action contact | Yes | 8070/2-1-WH-U60 | 258221 | 168 g |
| | | Snap-action contact | Yes | 8070/2-2-WH-U60 | 258229 | 168 g |
| | | Snap-action contact | No | 8070/2-5-WH-U60 | 268113 | 167 g |
| | 2 NC | Slow-action contact | Yes | 8070/2-3-WH-U60 | 258237 | 168 g |
| | 2 NO | Snap-action contact | No | 8070/2-4-WH-U60 | 268434 | 167 g |
| Actuator | | Roller plunger | | | | |
| Figure | Contacts | Switching function | Positive opening operation | Product Type | Art. No. | Weight |
| | 1 NC + 1 NO | Slow-action contact | Yes | 8070/2-1-R-U60 | 258220 | 168 g |
| | | Snap-action contact | Yes | 8070/2-2-R-U60 | 258228 | 168 g |
| | | Snap-action contact | No | 8070/2-5-R-U60 | 268112 | 167 g |
| | 2 NC | Slow-action contact | Yes | 8070/2-3-R-U60 | 258236 | 168 g |
| | 2 NO | Snap-action contact | No | 8070/2-4-R-U60 | 268433 | 167 g |
| Actuator | | Rotary lever | | | | |
| Figure | Contacts | Switching function | Positive opening operation | Product Type | Art. No. | Weight |
| | 1 NC + 1 NO | Slow-action contact | Yes | 8070/2-1-D-U60 | 275063 | 234 g |
| | | Slow-action contact, Overlapping | Yes | 8070/2-5-D-U60 | 275067 | 167 g |
| | | Snap-action contact | Yes | 8070/2-2-D-U60 | 275064 | 234 g |
| | 2 NC | Slow-action contact | Yes | 8070/2-3-D-U60 | 275065 | 234 g |
| | 2 NO | Slow-action contact | No | 8070/2-4-D-U60 | 275066 | 243 g |
| Actuator | | Safety switch | | | | |
| Figure | Contacts | Switching function | Positive opening operation | Product Type | Art. No. | Weight |
| | 1 NC + 1 NO | Slow-action contact | Yes | 8070/2-1-AZ-U60 | 258226 | 194 g |
| | 2 NC | Slow-action contact | Yes | 8070/2-3-AZ-U60 | 258241 | 194 g |

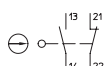
| Selection Table | | | | | | |
|-----------------|-------------|---------------------|----------------------------|--------------------|----------|--------|
| Actuator | | Spring rod head | | | | |
| Figure | Contacts | Switching function | Positive opening operation | Product Type | Art. No. | Weight |
| | 1 NC + 1 NO | Snap-action contact | No | 8070/2-2-TK300-U60 | 275346 | 204 g |
| | | Snap-action contact | No | 8070/2-2-TK-U60 | 258234 | 204 g |

The actuators are included, but not installed.
 Actuators without positive opening are not suitable for safety circuits!
 Safety switch, split actuator made of metal (please order separately; see accessories and spare parts)

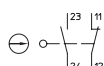
| Technical Data | | | | | |
|---|--|--|--|--|--|
| Variant | 8070/2-1 8070/2-2 8070/2-5 | 8070/2-1-AZ-U60 | 8070/2-3 8070/2-4 | 8070/2-3-AZ-U60 | |
| Explosion Protection | | | | | |
| IECEX gas explosion protection | Ex db eb IIC T6 Gb | Ex db eb IIC T6 Gb | Ex db eb IIC T6 Gb | Ex db eb IIC T6 Gb | Ex db eb IIC T6 Gb |
| IECEX dust explosion protection | Ex tb IIIC T80 °C Db | Ex tb IIIC T80 °C Db | Ex tb IIIC T80 °C Db | Ex tb IIIC T80 °C Db | Ex tb IIIC T80 °C Db |
| ATEX gas explosion protection | ⊕ II 2 G Ex db eb IIC T6 Gb | ⊕ II 2 G Ex db eb IIC T6 Gb | ⊕ II 2 G Ex db eb IIC T6 Gb | ⊕ II 2 G Ex db eb IIC T6 Gb | ⊕ II 2 G Ex db eb IIC T6 Gb |
| ATEX dust explosion protection | ⊕ II 2 D Ex tb IIIC T80 °C Db | ⊕ II 2 D Ex tb IIIC T80 °C Db | ⊕ II 2 D Ex tb IIIC T80 °C Db | ⊕ II 2 D Ex tb IIIC T80 °C Db | ⊕ II 2 D Ex tb IIIC T80 °C Db |
| Certificates | ATEX (BVS), Canada (CSA), China (CQST), IECEx (BVS), India (PESO), Korea (KGS), USA (CSA) | ATEX (BVS), Canada (CSA), China (CQST), IECEx (BVS), India (PESO), USA (CSA) | ATEX (BVS), Canada (CSA), China (CQST), IECEx (BVS), India (PESO), Korea (KGS), USA (CSA) | ATEX (BVS), Canada (CSA), China (CQST), IECEx (BVS), India (PESO), USA (CSA) | ATEX (BVS), Canada (CSA), China (CQST), IECEx (BVS), India (PESO), USA (CSA) |
| Declaration of Conformity | ATEX (EUK), ATEX (Simple apparatus), Declaration of Conformity (ATEX) | ATEX (EUK), ATEX (Simple apparatus), Declaration of Conformity (ATEX) | ATEX (EUK), ATEX (Simple apparatus), Declaration of Conformity (ATEX) | ATEX (EUK), ATEX (Simple apparatus), Declaration of Conformity (ATEX) | ATEX (EUK), ATEX (Simple apparatus), Declaration of Conformity (ATEX) |
| Electrical Data | | | | | |
| Rated operational voltage DC | 125 V | 125 V | 125 V | 125 V | 125 V |
| AC operating voltage (equal potential) | 500 V | 500 V | 400 V | 400 V | 400 V |
| AC operating voltage (unequal potential) | 250 V | 250 V | 250 V | 250 V | 250 V |
| Rated insulation voltage | 500 V | 500 V | 500 V | 500 V | 500 V |
| Rated insulation voltage note | (for simple apparatus: 40 V) | (for simple apparatus: 40 V) | (for simple apparatus: 40 V) | (for simple apparatus: 40 V) | (for simple apparatus: 40 V) |
| Rated operational current max. | 4 A | 4 A | 4 A | 4 A | 4 A |
| Rated operational current note | (for simple apparatus: 200 mA; inductance L and capacitance C _i are negligible) | (for simple apparatus: 200 mA; inductance L and capacitance C _i are negligible) | (for simple apparatus: 200 mA; inductance L and capacitance C _i are negligible) | (for simple apparatus: 200 mA; inductance L and capacitance C _i are negligible) | (for simple apparatus: 200 mA; inductance L and capacitance C _i are negligible) |
| Electrical service life | Max. 10 ⁶ operating cycles | Max. 10 ⁶ operating cycles | Max. 10 ⁶ operating cycles | Max. 10 ⁶ operating cycles | Max. 10 ⁶ operating cycles |
| Mechanical service life | Max. 10 ⁶ operating cycles | Max. 10 ⁶ operating cycles | Max. 10 ⁶ operating cycles | Max. 10 ⁶ operating cycles | Max. 10 ⁶ operating cycles |
| Rated surge voltage | 6 kV | 6 kV | 6 kV | 6 kV | 6 kV |
| Max. short-circuit protection | 6 A | 6 A | 6 A | 6 A | 6 A |
| Maximum operating frequency | 1800 operating cycles/h | 1800 operating cycles/h | 1800 operating cycles/h | 1800 operating cycles/h | 1800 operating cycles/h |
| Ambient Conditions | | | | | |
| Ambient temperature | -60 °C ... +55 °C (Max. 4 A) -20 °C ... +60 °C (IP67 (EN 60529)) (Max. 2 A) -60 °C ... +60 °C (Max. 2 A) | -50 °C ... +55 °C (Max. 4 A) -20 °C ... +60 °C (IP67 (EN 60529)) (Max. 2 A) -50 °C ... +60 °C (Max. 2 A) | -60 °C ... +55 °C (Max. 4 A) -20 °C ... +60 °C (IP67 (EN 60529)) (Max. 2 A) -60 °C ... +60 °C (Max. 2 A) | -50 °C ... +55 °C (Max. 4 A) -20 °C ... +60 °C (IP67 (EN 60529)) (Max. 2 A) -50 °C ... +60 °C (Max. 2 A) | -50 °C ... +60 °C (Max. 2 A) |
| Ambient temperature | -60 °C ... +55 °C (Max. 4 A) -60 °C ... +60 °C (Max. 2 A) | -50 °C ... +55 °C (Max. 4 A) -50 °C ... +60 °C (Max. 2 A) | -60 °C ... +55 °C (Max. 4 A) -60 °C ... +60 °C (Max. 2 A) | -50 °C ... +55 °C (Max. 4 A) -50 °C ... +60 °C (Max. 2 A) | -50 °C ... +60 °C (Max. 2 A) |
| Mechanical Data | | | | | |
| Degree of protection (IP) | IP66 | IP66 | IP66 | IP66 | IP66 |
| Degree of protection (IP) (IEC 60529) | IP67 | IP67 | IP67 | IP67 | IP67 |
| Degree of protection (IP) IEC 60529) note | down to -20 °C | down to -20 °C | down to -20 °C | down to -20 °C | down to -20 °C |
| Enclosure material | Thermoplast GF, impact resistant | Thermoplast GF, impact resistant | Thermoplast GF, impact resistant | Thermoplast GF, impact resistant | Thermoplast GF, impact resistant |
| Cover material | Duroplast GF, impact resistant | Duroplast GF, impact resistant | Duroplast GF, impact resistant | Duroplast GF, impact resistant | Duroplast GF, impact resistant |

| Technical Data | | | | |
|--|---|---|---|---|
| Variant | 8070/2-1 8070/2-2 8070/2-5 | 8070/2-1-AZ-U60 | 8070/2-3 8070/2-4 | 8070/2-3-AZ-U60 |
| Mechanical Data | | | | |
| Contact material | Silver-nickel | Silver-nickel | Silver-nickel | Silver-nickel |
| Finely stranded connection cross section | 0.75 – 1.5 mm ² | 0.75 – 1.5 mm ² | 0.75 – 1.5 mm ² | 0.75 – 1.5 mm ² |
| Solid connection cross section | 0.75 – 1.5 mm ² | 0.75 – 1.5 mm ² | 0.75 – 1.5 mm ² | 0.75 – 1.5 mm ² |
| Contact system | 2-pole, galvanically separated, with double break | 2-pole, galvanically separated, with double break | 2-pole, galvanically separated, with double break | 2-pole, galvanically separated, with double break |
| Contact opening | ≥ 1.5 mm (isolating distance ≥ 3 mm) | ≥ 1.5 mm (isolating distance ≥ 3 mm) | ≥ 1.5 mm (isolating distance ≥ 3 mm) | ≥ 1.5 mm (isolating distance ≥ 3 mm) |
| Seal | Silicone | Silicone | Silicone | Silicone |
| Components | | | | |
| Cable glands and entries | 1 x M20 Ø 7 to 13 mm | 1 x M20 Ø 7 to 13 mm | 1 x M20 Ø 7 to 13 mm | 1 x M20 Ø 7 to 13 mm |
| Cable entry material | Polyamide | Polyamide | Polyamide | Polyamide |
| Material cable gland | Polyamide, Glass fibre reinforced | Polyamide, Glass fibre reinforced | Polyamide, Glass fibre reinforced | Polyamide, Glass fibre reinforced |

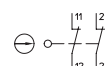
Technical Drawings – Subject to Alterations



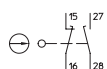
Slow-action contact, 1 NC + 1 NO
8060/-1; 807./2-1



Snap-action contact, 1 NC + 1 NO
8060/-2; 807./2-2






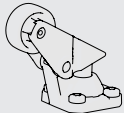

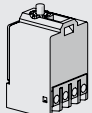
Slow-action contact, 2 NCs
8060/-3; 807./2-3



Slow-action contact, 1 NC + 1 NO, overlapping
8060/-5; 807./2-5

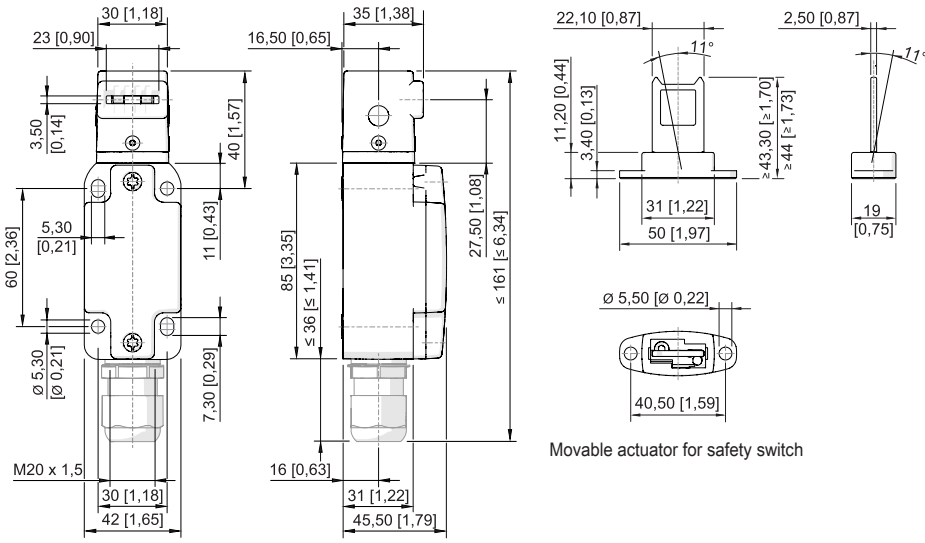
Accessories

| Figure | Description | Art. No. | Weight |
|----------------------------|--|----------|--------|
| Actuator | | | |
| | Straight actuator, for 8070/2--AZ | 258607 | 100 g |
| | Bent actuator, for 8070/2--AZ | 258608 | 100 g |
| | Movable actuator, for 8070/2--AZ | 258609 | 100 g |
| Plastic cable gland | | | |
| | 8161/7-M20-1307, Ex e Plastic, M20 x 1.5, cable outer diameter 7 to 13 mm Lot size 50 pieces | 239172 | 13 g |

| Spare Parts | | | |
|---|--|----------|--------|
| Figure | Description | Art. No. | Weight |
| Actuator | | | |
|  | Roller plunger actuator | 258602 | 100 g |
|  | Spring rod head actuator | 258605 | 100 g |
|  | Roller lever actuator | 258603 | 100 g |
|  | Parallel lever actuator | 258604 | 100 g |
|  | Rotary lever actuator | 275368 | 40 g |
|  | Adjustable rotary lever actuator | 275370 | 80 g |
|  | Rod lever actuator | 275369 | - |
|  | Safety switch actuator | 258606 | 100 g |
| Contact element | | | |
|  | 1 NC + 1 NO slow-action contact 8080/1-1 | 132529 | 25 g |
| | 1 NC + 1 NO snap-action contact 8080/1-2 | 279482 | 25 g |
| | 2 NC slow-action contact 8080/1-3 | 132532 | 25 g |

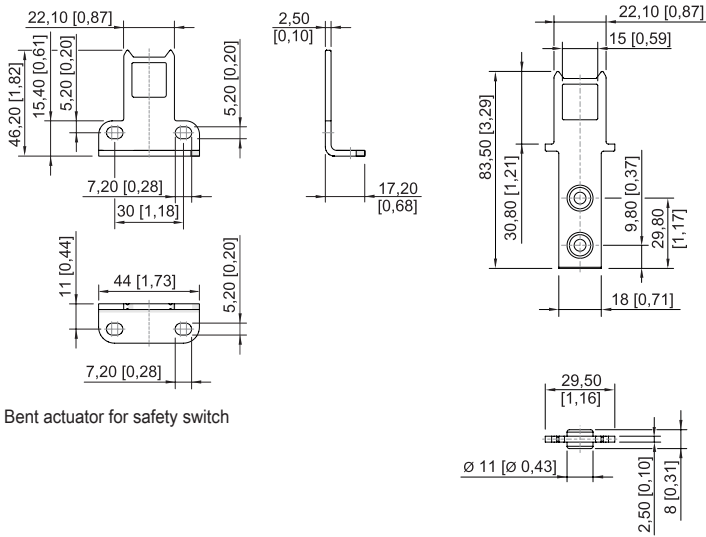
The cable gland is included in the delivery.

Lot size: Purchase order quantity in [no. of units]; the delivery quantity is automatically rounded to the lot size.



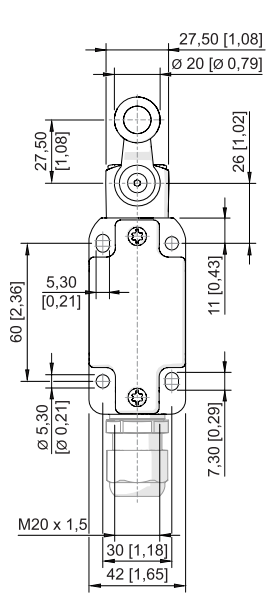
Movable actuator for safety switch

Safety switch 8070/2--AZ-U50

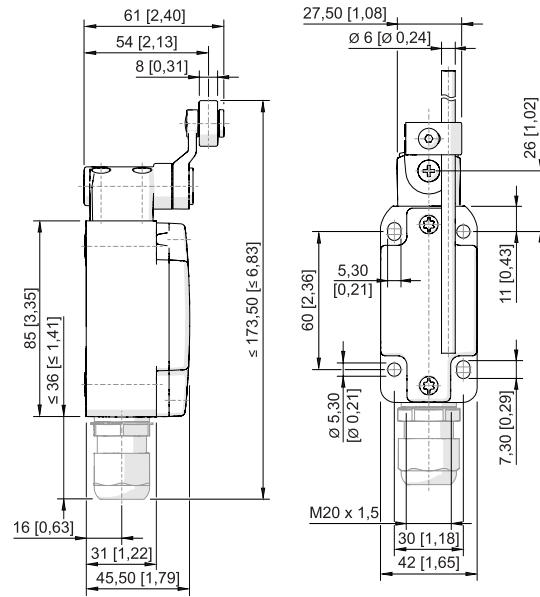


Bent actuator for safety switch

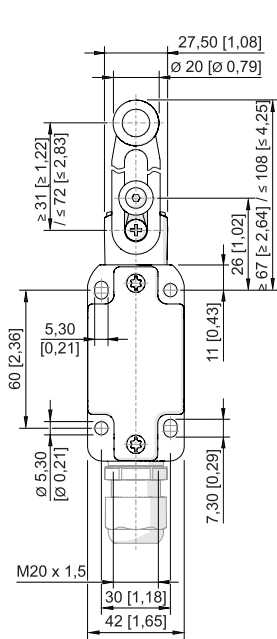
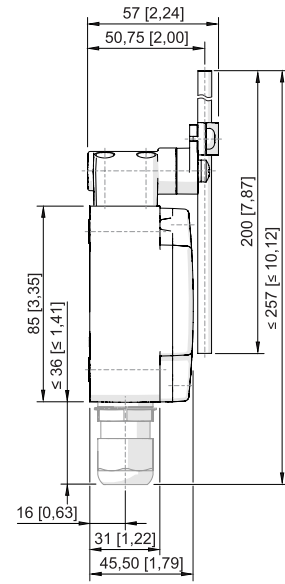
Straight actuator for safety switch



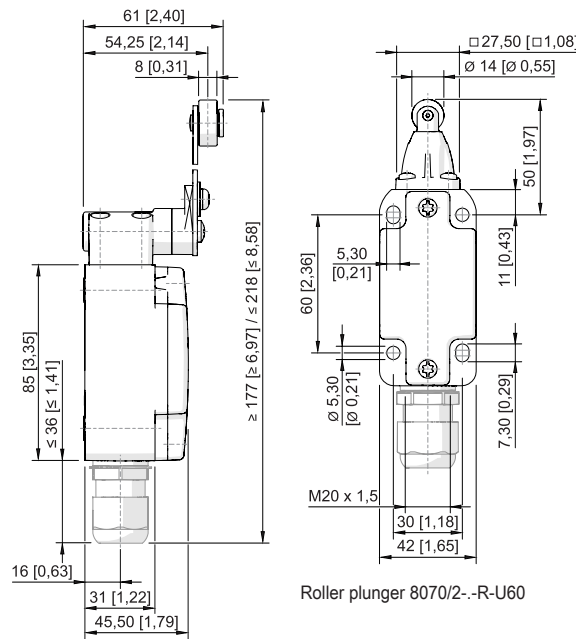
Swivelling lever 8070/2--D-U60



Rod lever 8070/2-DD-U60



Swivelling lever 8070/2--DS-U60



Roller plunger 8070/2--R-U60

