

## info

### SPRING BALANCER

The equipment is distinguished by its high quality and long service life. The load capacities range from 1 kg to 300 kg. The suspended tool is brought into a weightless state over the entire cable pull-out and, after release, is returned to the set load.

#### Productively

Springs balancers make the suspended load almost weightless. A tool is suspended at the workplace in an apparatus whose load capacity range covers the weight of the tool plus the connecting cable or hose. The spring is then adjusted to the exact total weight with an Allen wrench supplied with it – the tool can be moved up and down without effort.

“Working equipment and tools that hang on spring pulls/balancers can be grasped more quickly and can also be put down again”. Apart from productivity, order and cleanliness in the workplace will also be significantly improved.

#### Applications

For electric and pneumatic tools, grinding machines, polishing machines, impact screwdrivers, riveting machines, spot welding pincers, crane controls, etc.



### SPRING BALANCERS | TCN

The spring pulls/balancer type TCN have an aluminium die-cast housing, a flexible and resistant stainless steel wire cable, low-friction bushes, precise cable guidance, safety hooks and a long-life spring. A rope supplied with the rope serves as an additional fall protection.

#### Spring balancer 9311 – 9350

When spring balancers are used, the tool is pulled into the respective working position, with a progressive retraction force. After release, the tool automatically returns to the rest position. In models with additional locking, the cable of the spring pull is blocked in steps during withdrawal. By pulling again on the tool or cable, the locking is released and the tool returns to the rest position.

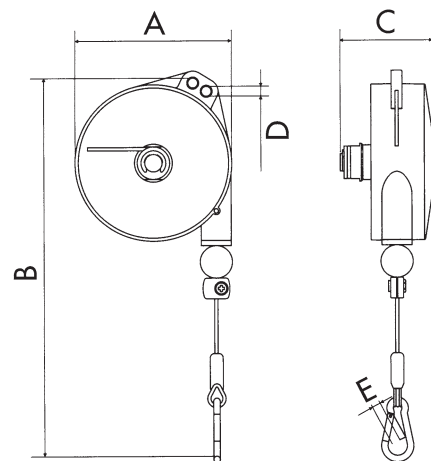
#### Spring balancer 9354 – 9444

Equipped with a conical cable drum, the suspended load remains almost suspended when released. The position of the tool can be changed by minimal effort due to the almost linear retraction force. The position of the attached device changes only by minimal effort of the operator.

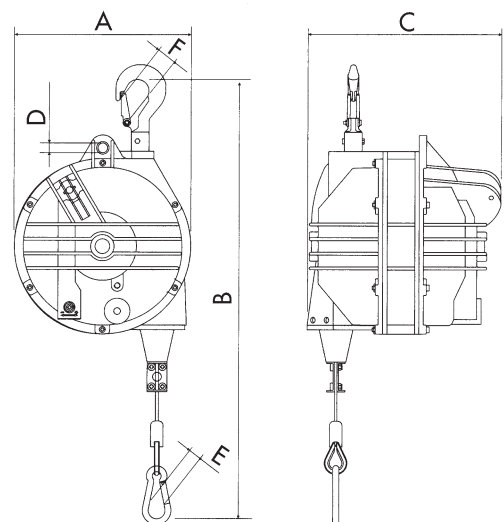
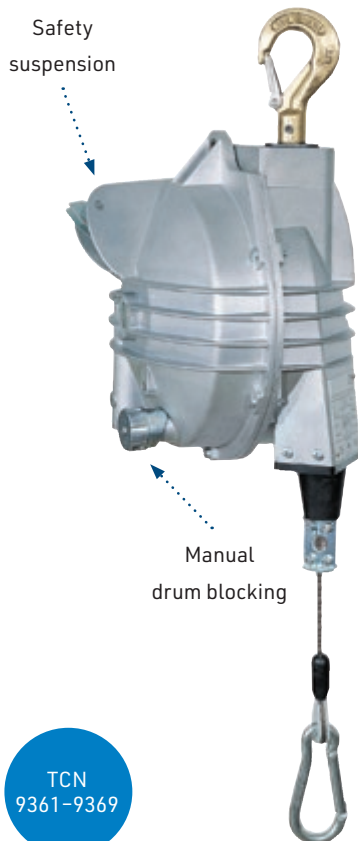
#### Additional equipment

##### Typ 9361 – 9444

In accordance with the strictest safety standards, kinematics blocks the drum in case of spring breakage and prevents the fall of the load. The particularly stable monoblock design protects the balancer particularly well in the extra heavy version. The cable guide is low-friction by means of rollers.



TCN 9311-9350



TCN 9354-9444

# Spring balancers

| TYPE TCN | Capacity kg | Rope length m | Rope-Ø mm | Weight kg | Dimensions in mm |     |     |      |    |    | Order No. |
|----------|-------------|---------------|-----------|-----------|------------------|-----|-----|------|----|----|-----------|
| A        | B           | C             | D         | E         | F                |     |     |      |    |    |           |
| 9311     | 0.4 - 1     | 1.6           | 2         | 0.6       | 109              | 272 | 55  | Ø 8  | 6  | -  | G30000    |
| 9312     | 1 - 2       | 1.6           | 2         | 0.6       | 109              | 272 | 55  | Ø 8  | 6  | -  | G30001    |
| 9313     | 2 - 3       | 1.6           | 2         | 0.7       | 109              | 272 | 55  | Ø 8  | 6  | -  | G30002    |
| 9320     | 1 - 2.5     | 2             | 2         | 2         | 149              | 324 | 85  | Ø 8  | 8  | -  | G30003    |
| 9321     | 2 - 4       | 2             | 2         | 2         | 149              | 324 | 85  | Ø 8  | 8  | -  | G30004    |
| 9322     | 4 - 6       | 2             | 2         | 2.3       | 149              | 324 | 85  | Ø 8  | 8  | -  | G30005    |
| 9323     | 6 - 8       | 2             | 2         | 2.5       | 149              | 324 | 85  | Ø 8  | 8  | -  | G30006    |
| 9336     | 2 - 4       | 2.5           | 2.5       | 2.9       | 180              | 368 | 92  | Ø 9  | 10 | -  | G30033    |
| 9337     | 4 - 6       | 2.5           | 2.5       | 3.2       | 180              | 368 | 92  | Ø 9  | 10 | -  | G30034    |
| 9338     | 6 - 8       | 2.5           | 2.5       | 3.5       | 180              | 368 | 92  | Ø 9  | 10 | -  | G30035    |
| 9339     | 8 - 10      | 2.5           | 2.5       | 3.7       | 180              | 368 | 92  | Ø 9  | 10 | -  | G30036    |
| 9340     | 10 - 14     | 2.5           | 2.5       | 4         | 180              | 368 | 92  | Ø 9  | 10 | -  | G30037    |
| 9346 *   | 2 - 4       | 2.5           | 2.5       | 3         | 180              | 368 | 98  | Ø 9  | 10 | -  | G30056    |
| 9347 *   | 4 - 6       | 2.5           | 2.5       | 3.3       | 180              | 368 | 98  | Ø 9  | 10 | -  | G30057    |
| 9348 *   | 6 - 8       | 2.5           | 2.5       | 3.6       | 180              | 368 | 98  | Ø 9  | 10 | -  | G30058    |
| 9349 *   | 8 - 10      | 2.5           | 2.5       | 3.8       | 180              | 368 | 98  | Ø 9  | 10 | -  | G30059    |
| 9350*    | 10 - 14     | 2.5           | 2.5       | 4         | 180              | 368 | 98  | Ø 9  | 10 | -  | G30060    |
| 9354     | 4 - 7       | 2             | 3         | 5         | 196              | 502 | 140 | Ø 11 | 10 | 18 | G30012    |
| 9355     | 7 - 10      | 2             | 3         | 5.5       | 196              | 502 | 140 | Ø 11 | 10 | 18 | G30013    |
| 9356     | 10 - 14     | 2             | 3         | 5.5       | 196              | 502 | 140 | Ø 11 | 10 | 18 | G30014    |
| 9357     | 14 - 18     | 2             | 3         | 6.5       | 196              | 502 | 140 | Ø 11 | 10 | 18 | G30015    |
| 9358     | 18 - 22     | 2             | 3         | 6         | 196              | 502 | 140 | Ø 11 | 10 | 18 | G30016    |
| 9359     | 22 - 25     | 2             | 3         | 6.6       | 196              | 502 | 140 | Ø 11 | 10 | 18 | G30017    |
| 9354EX   | 4 - 7       | 2             | 3         | 4.94      | 196              | 502 | 140 | 11   | 10 | 18 | G30130    |
| 9355EX   | 7 - 10      | 2             | 3         | 5.3       | 196              | 502 | 140 | 11   | 10 | 18 | G30131    |
| 9356EX   | 10 - 14     | 2             | 3         | 5.67      | 196              | 502 | 140 | 11   | 10 | 18 | G30132    |
| 9357EX   | 14 - 18     | 2             | 3         | 6.26      | 196              | 502 | 140 | 11   | 10 | 18 | G30133    |
| 9358EX   | 18 - 22     | 2             | 3         | 5.39      | 196              | 502 | 140 | 11   | 10 | 18 | G30134    |
| 9359EX   | 22 - 25     | 2             | 3         | 6.53      | 196              | 502 | 140 | 11   | 10 | 18 | G30135    |
| 9361     | 10 - 15     | 2             | 4         | 10.3      | 240              | 630 | 215 | 12.5 | 12 | 18 | G30018    |
| 9362     | 15 - 20     | 2             | 4         | 10.6      | 240              | 630 | 215 | 12.5 | 12 | 18 | G30019    |
| 9363     | 20 - 25     | 2             | 4         | 11.2      | 240              | 630 | 215 | 12.5 | 12 | 18 | G30020    |
| 9364     | 25 - 30     | 2             | 4         | 11.5      | 240              | 630 | 215 | 12.5 | 12 | 18 | G30021    |
| 9365     | 30 - 35     | 2             | 4         | 11.8      | 240              | 630 | 215 | 12.5 | 12 | 18 | G30022    |
| 9366     | 35 - 45     | 2             | 4         | 12.4      | 240              | 630 | 215 | 12.5 | 12 | 18 | G30023    |
| 9367     | 45 - 55     | 2             | 4         | 12.5      | 240              | 630 | 215 | 12.5 | 12 | 18 | G30024    |
| 9368     | 55 - 65     | 2             | 4         | 13.6      | 240              | 630 | 215 | 12.5 | 12 | 18 | G30025    |
| 9369     | 65 - 75     | 2             | 4         | 14.5      | 240              | 630 | 215 | 12.5 | 12 | 18 | G30026    |
| 9370     | 75 - 90     | 2             | 5         | 17.3      | 240              | 630 | 250 | 12.5 | 12 | 18 | G30027    |
| 9371     | 90 - 105    | 2             | 5         | 18        | 240              | 630 | 250 | 12.5 | 12 | 18 | G30028    |
| 9401     | 15 - 20     | 2.5           | 5         | 19        | 290              | 710 | 220 | 15   | 20 | 22 | G30080    |
| 9402     | 20 - 30     | 2.5           | 5         | 19.8      | 290              | 710 | 220 | 15   | 20 | 22 | G30081    |
| 9403     | 30 - 40     | 2.5           | 5         | 20.8      | 290              | 710 | 220 | 15   | 20 | 22 | G30082    |
| 9404     | 40 - 50     | 2.5           | 5         | 23.9      | 290              | 710 | 220 | 15   | 20 | 22 | G30083    |
| 9405     | 50 - 60     | 2.5           | 5         | 25.4      | 290              | 710 | 220 | 15   | 20 | 22 | G30084    |
| 9411     | 60 - 70     | 2.5           | 5         | 26.8      | 290              | 710 | 270 | 15   | 20 | 22 | G30085    |
| 9412     | 70 - 80     | 2.5           | 5         | 27.8      | 290              | 710 | 270 | 15   | 20 | 22 | G30086    |
| 9413     | 80 - 90     | 2.5           | 5         | 28.8      | 290              | 710 | 270 | 15   | 20 | 22 | G30087    |
| 9414     | 90 - 100    | 2.5           | 5         | 30        | 290              | 710 | 270 | 15   | 20 | 22 | G30088    |
| 9422     | 100 - 120   | 2.5           | 5         | 38.7      | 290              | 710 | 355 | 15   | 20 | 22 | G30089    |
| 9423     | 120 - 140   | 2.5           | 5         | 41.8      | 290              | 710 | 355 | 15   | 20 | 22 | G30090    |
| 9424     | 130 - 150   | 2.5           | 5         | 44.5      | 290              | 710 | 355 | 15   | 20 | 22 | G30091    |
| 9425     | 140 - 160   | 2.5           | 5         | 48        | 290              | 710 | 355 | 15   | 20 | 22 | G30092    |
| 9426     | 160 - 180   | 2.5           | 5         | 49        | 290              | 710 | 355 | 15   | 20 | 22 | G30093    |
| 9431     | 15 - 20     | 3             | 5         | 19.1      | 290              | 710 | 220 | 15   | 20 | 22 | G30094    |
| 9432     | 20 - 25     | 3             | 5         | 19.9      | 290              | 710 | 220 | 15   | 20 | 22 | G30095    |
| 9433     | 25 - 35     | 3             | 5         | 20.9      | 290              | 710 | 220 | 15   | 20 | 22 | G30096    |
| 9434     | 35 - 45     | 3             | 5         | 23.8      | 290              | 710 | 270 | 15   | 20 | 22 | G30097    |
| 9435     | 40 - 50     | 3             | 5         | 23.9      | 290              | 710 | 270 | 15   | 20 | 22 | G30098    |
| 9436     | 50 - 60     | 3             | 5         | 25.3      | 290              | 710 | 270 | 15   | 20 | 22 | G30099    |
| 9441     | 60 - 70     | 3             | 5         | 27        | 290              | 710 | 270 | 15   | 20 | 22 | G30100    |
| 9442     | 70 - 80     | 3             | 5         | 28        | 290              | 710 | 270 | 15   | 20 | 22 | G30101    |
| 9443     | 80 - 90     | 3             | 5         | 29        | 290              | 710 | 270 | 15   | 20 | 22 | G30102    |
| 9444     | 80 - 100    | 3             | 5         | 29        | 290              | 710 | 270 | 15   | 20 | 22 | G30103    |

The types marked with \* have an internal latch which, when the cable is pulled out, engages and holds the suspended load. Briefly tighten the rope and it rolls back on the drum. Other versions on request.